



## Original Correspondence.

## THE LONDON COAL MARKET.

SIR.—I think you are quite right in confining your attention to an abuse whose removal is within the competence of the Coal Trade Association, and in not allowing yourself to be drawn into a discussion of questions about direct consignments and restrictive bonds, as suggested in last week's Journal by Mr. Hugh Taylor. No man knows better than Mr. Taylor that the revival of the old system of selling to the shipowner is impracticable, simply because in the present condition of the London Coal Market shipowners will not speculate in coal; and as to restrictive bonds, the free trade tendencies of the age are utterly opposed to them, and the keenness of competition renders it quite impossible to carry them out. Let the coalowners reform the abuses of the Coal Market, let them agitate for a removal of oppressive dues, let them use their influence to obtain a reduction of railway charges; these are all matters which, in a greater or less degree, lie within their competence—reforms whose accomplishment must necessarily precede even the attempt to introduce either of the plans suggested by Mr. Taylor.—*South Shields, Feb. 2.*

A TYNESIDER.

## CANDLES v. SAFETY-LAMPS.

SIR.—A rather unfair attack has been made upon your excellent correspondent, Mr. Jos. Goodwin, because he happened to state at the last meeting of the Manchester Geological Society that "he would sooner use a candle, with all its defects, than a Davy lamp;" yet, I think, he is not the only practical man who entertains that opinion. With reference to this remark, his opponent states that any person who is at all acquainted with mining will see at once that Mr. Goodwin has never worked in a mine of a greater depth than about 150 yards; and, though he has gone through all the stages of that dangerous occupation, from that of standing behind a trap-door to the management of a roadside colliery, yet it will be apparent to all that he has never seen a colliery of greater depth than above stated. It is well known that any amount of ventilation cannot dilute gases which are very often liberated from these deep mines; and it is only through the agency of safety-lamps that the deep miners can be worked.

Now, comparing the two opinions, I believe there are few who will not concur with me that Mr. Goodwin's remark displays by far the greater amount of practical and valuable knowledge. No one can be more desirous than myself that the inventors of the various kinds of safety-lamps which have been from time to time introduced should be rewarded for their ingenuity; but I truly believe that quite as many deaths have resulted from the use of safety-lamps as have been saved by their use. Can any of your correspondents inform me how long it has been "well known" that there is more difficulty in ventilating a deep colliery than a shallow one? For my own part, I am inclined to think the reverse is the case. If, however, the general opinion is that difficulty to properly ventilate coal pits increases with depth, I may be induced to consider how far Mr. Goodwin's remarks are calculated to do injury "to owners of collieries who do not understand mining."

The Inspectors of Coal Mines generally, and Mr. Joseph Dickinson, I think, in particular, have never ceased to contend that safety-lamps should be used as an adjunct to, and not as a substitute for, adequate ventilation, and of the accuracy of this view surely two opinions cannot exist. Now, is it not a fact that, as a rule, the air is better in those pits where candles are used than in those where safety-lamps are employed? And why is it? Because, but too often, coalowners and colliery viewers consider that "adequate ventilation" means a state of ventilation which just enables a man to live, and just prevents explosion. Where candles are used the air must be good, but where lamps are employed ventilation is too often neglected. Let the Inspectors have power to enforce fresh air and safety-lamps, instead of fresh air or safety-lamps, and the mortality in collieries will be at once reduced.

J. D.

Our correspondent evidently alludes to a letter which appeared in the *Manchester Guardian*: in that paper of Thursday we find the following communication from Mr. Goodwin, and which we, therefore, think it only proper to subjoin:—

SIR.—Since you cannot afford space for me to answer the remarks of your correspondent in detail, perhaps you will permit me to say that I have not only worked in mines far more than double the depth your correspondent names, but that I have the management of a colliery at the present time, the workings of which are more than 360 yards in depth. If your correspondent's remarks respecting the roadside colliery were made for the purpose of insinuating that my experience was only of a limited character, it is but necessary to say that I have had the management of collieries employing more than 600 workmen at a time, and at the present time have the management of three distinct and separate collieries. I may safely say that there is not a single branch of mining engineering but has afforded me an extensive and varied experience. Your correspondent's remarks respecting the impossibility of diluting gases in deep mines sets at defiance all well-known chemical laws, besides being opposed to all demonstrative facts; therefore, they carry their own refutation with them. What I said at our meeting was, that rather than work a colliery upon the principle of converting the old workings into a series of huge gasometers, or receptacles for containing the destructive enemy, fire-damp, as many collieries are worked, I would rather depend upon a proper system of working a colliery, and accept the principle of working with naked lights, with all its defects, than the use of the safety-lamp in a mine so worked. With the safety-lamp the poor miner may be worked in an atmosphere that either consigns him to an early grave, or stamps him with all the signs of premature old age and decay before he has arrived at the prime of life. The proof that the safety-lamp is often used as a substitute for ventilation is to be found in the cases where proprietors of mines are summoned for such offences; but the cases that come before the public give but a very faint idea of the extent to which it is practised. If your correspondent will unmask himself, and meet me in the columns of the *Mining Journal*, I shall be most happy to discuss the subject in all its bearings, or, if he should decline to do so, it would afford me pleasure to meet him at the Geological Society, Manchester, where I purpose reading a paper at a distant period, "On the Safety-lamp and its Uses."

Jos. GOODWIN.

COAL-WORKING—LONG WALL v. PILLAR AND STALL.

SIR.—Those of your readers who have been at the trouble to read the whole of Mr. Naysmith's remarks in defence of his paper published in the Journal of Nov. 29, will not be much surprised to hear that he is desirous of finding some pretext to withdraw from his unenviable position. I do not object, for my own part, to his mode of procedure, for it only either shows the weakness of his case, or his want of knowledge upon subjects with which he ought to be thoroughly conversant. I, nevertheless, deem it necessary to draw the attention of your readers to the fact that Mr. Naysmith has not attempted to vindicate his position by showing that the principle of ventilation and mode of working which he so strongly recommended were equal to the system he so strongly condemned. It is true that he has made the admission that the long wall system he was condemning was not the long wall system skilfully conducted; and in fact, if not in words, that he was not master of the subject he attempted to write upon. By this time Mr. Naysmith will have discovered how dangerous it is to attempt to instruct the public upon matters he does not himself properly understand. I flatter myself that at no distant period Mr. Naysmith will compliment me on pointing out the danger, and thus enabling him to steer clear of some of the shoals and quicksands of life with which he otherwise would have been beset.

I object to the term discussion being applied to the correspondence that has taken place on the above-named subject, on the ground that Mr. Naysmith has studiously avoided entering into any defence of the principles he so strongly advocated, beyond that of making a few random remarks upon subjects having little or no bearing upon the subject at issue. If Mr. Naysmith had endeavoured to show that his mode of splitting or dividing a current of air possessed some advantages (although he had been unsuccessful), it would at least have shown that he was not trifling with a subject of such vital importance. Or if he had admitted it was an error on his part to have advocated and drawn a diagram illustrative of a principle whereby the whole of the workings are converted into receptacles for a gas ever ready to belch forth its destructive and deadly powers so soon as the spark is applied, whether by accident, recklessness, or any other cause, it would have been considered a pardonable offence in one so young in experience, if not in years. If I had overstated the danger and evils consequent upon working a colliery on the principle advocated by Mr. Naysmith, surely he could have pointed out in what respect I had done so; if not, have shown its advantages over other systems. Mr. Naysmith, however, passes over the subject in silence, from what motive we can only conjecture. Mr. Naysmith says, "I, however, cannot (with Mr. Goodwin) see any great danger in allowing the water level to be an intake air course." The principle of using a water or ledge level for an intake air course is one of the most primitive systems in connection with the working of coal mines, but it is now abandoned at all well-managed collieries. The objections to the principle are so apparent that it is almost unnecessary to dwell upon the subject, but, for the information of Mr. Naysmith, I will briefly refer to a few of the most prominent objections. First, should any of the machinery connected with the pumping of water break or become deranged, so as to prevent the pumping but for a very limited time, the water becomes roofed, or, in other words, fills the level, thus effectually stopping the circulation of the air, and, as a natural consequence in a dry seam, allowing the whole of the workings to become charged with that subtle and deadly enemy, fire-damp. Anyone who has had to do with the removal of large bodies of carbureted hydrogen, or fiery gas, in the underground workings of a mine is aware that extraordinary care is required to prevent an explosion, especially when a bottom furnace is used as a ventilating agent. Again, suppose the water becomes dammed up by a fall of the roof, or any other cause, at a considerable distance from the shaft, the engine-tenter may flatten himself that all is going on right, and that he is pumping the whole of the water out of the mine, as shown by his indicator, whilst at the same time the mine may be generating gas to such an extent that a few hours defective ventilation will change a comparatively safe mine into one of the most dangerous description. Nor is it necessary for the whole of the water level to be filled, and the ventilation wholly suspended, to produce these disastrous effects; for the same may occur by the intake air course being reduced in size by the water rising in the level, and thus lessening the quantity of air passing through a mine, when the atmosphere of the mine is already almost at the explosive point. In fact, it is practically impossible to pass a uniform current of air through a mine where the water level is used as an intake air course; and sooner or later all the contingencies named, and many others, will have to be guarded against, if that system be practised. To my mind it is

astonishing to find a gentleman styling himself a mining engineer, and claiming the advantage of having received his training under some of the most eminent mining engineers of the day, advocating such a system, and when his attention is drawn to it making such a reply. If this case is to be taken as a standard of competency of scientific training, well may many object to that class of colliery managers.

In reply to the defective and inauspicious system of making stoppings that I pointed out in Mr. Naysmith's system he remarks—"Now, every person conversant with coal mining in South Wales knows that it is useless to build permanent stoppings nearer the main levels or corners of the coal than 4 yards, on account of the open slips, or facings, which penetrate so far that it requires that distance to keep them tight." Either Mr. Naysmith vastly underrates the powers of discernment of your readers, or otherwise he is desirous of showing how inconsistent he can be in his remarks. Supposing, as Mr. Naysmith says, a stopping cannot be made air-tight at a less distance than 4 yards from the level, it must of necessity require a distance of 8 yards, besides the thickness of the stopping, to keep the air in its proper course, for the open facings he speaks of must be above the stopping as well as below. Yet Mr. Naysmith, in describing his system, speaks of 6 yards pillars. Pray, Mr. Naysmith, what becomes of your perfect system of ventilation, when you get each alternate 6 yards and leave 6 yards pillars, if 8 yards pillars are required to keep the air in its proper course, where the coal has not been crushed by the process of working out one-half of it in driving the bords?" If Mr. Naysmith's latter statement be correct, it would be practically impossible to convey a current of air round the workings shown in his diagram; for whether the workings be in South Wales or elsewhere, if the air will penetrate through the coal 8 yards, where the coal is solid, it will certainly penetrate very much further when the superincumbent weight of the roof is forced upon the coal by the removal of one-half of the support. Therefore, either Mr. Naysmith's statement is incorrect, as most rational men will consider it, or he is showing the impracticability of conducting operations upon the principle he so recently spoke of as being the most perfect for getting coal.

In reply to the remarks of Mr. Naysmith not accepting Mr. Dickinson as an authority, I can only observe that I have a strong impression that Mr. Naysmith is almost the only person that could be found who would dispute such authority, when the statement was made in the positive and unequivocal manner that Mr. Dickinson made it. I think it would be very difficult indeed for Mr. Naysmith to name a gentleman who has had better opportunities of studying the different methods of working coal mines, or one who has more largely availed himself of the opportunities presented to him. Mr. Naysmith asks, when he admitted that one-sixth of all the coal wrought must be used for no better purpose than that of building gob walls? When he made the admission that he built a wall of small coal, dust, &c., for supporting the roof and dividing each bord, for purposes of ventilation. If a wall is to be built so as to be of any use for such purpose, it must at the least be 4 ft. in thickness, and the refuse upon which it is built is produced, according to Mr. Naysmith's own statement, from the working out of 6 or 8 yards of coal. If Mr. Naysmith had allowed this part of the subject to have passed by unchallenged he would, in all probability, not have stood worse in the estimation of his friends, whilst he would have spared himself the necessity of showing his limited acquaintance with metallurgy.

Mr. Naysmith says that he inferred from what I stated in reference to the colliery I mentioned as being worked upon the principle illustrated in his diagram, that we have since changed it to the long wall system. In reply, permit me to remark that I have no desire to be held responsible for all I write or utter, and take a pleasure in making any necessary correction or retraction, should a case be pointed out requiring it. If Mr. Naysmith will be kind enough to again read over my remarks, he will find that he has no grounds for drawing such an inference beyond that of his own fancy.

Mr. Naysmith says he has put four questions to me, which it appears to him have not been answered to his satisfaction. If Mr. Naysmith will bear in mind that I promised to meet either him or any other person at the colliery in question, and show them the plans and books, to corroborate all I have stated, he will see the unfairness of pressing me to say more upon the subject. If no such promise had been made I should have concluded that Mr. Naysmith wanted the information for some useful purpose, and was not putting the questions for the purpose of annoyance, and of drawing the attention of the public from the questions at issue; but since my remarks were accompanied by the liberal proposal that would have enabled Mr. Naysmith to have obtained all the information sought for, his motive in putting the questions becomes clear. I may, however, remark that so far from it being a colliery of only a few acres extent, it is not even hundred acres, and that the proprietors appear to be very well satisfied with such an output as Mr. Naysmith sneeringly remarks leaves very little room for a downward tendency. If Mr. Naysmith had been a gentleman of much experience, and a careful observer, he would have been aware that it is the exception, and not the rule, for collieries to answer the expectations of the proprietors; when too much attention is paid to raising the greatest quantity of coal in the least time; and that this circumstance has been the forerunner to the loss of many useful lives and much valuable property. My plan is to advocate raising as much coal as the market requires, and is found consistent with safety to life and property, and the adherence to some acknowledged principle of working a colliery. Beyond this I cannot consent to go.

Feeling that further efforts to bring the subject before your readers in an instructive manner with such an opponent as Mr. Naysmith is only waste of strength and time, which I can ill afford to spend in barren results at the present, I beg to take leave of your readers for the present, and to offer you my warmest thanks for the fairness with which we have been treated at your hands.

Jos. GOODWIN.

## Hyde and Haughton Collieries.

## PRACTICAL COLLIERY WORKING—VENTILATION.

SIR.—I hear some talk down here about a question as to how four galleries, driven out east, north, west, and south from the same coal pit, can be ventilated without using doors, and so as each gallery shall have a separate split of air, the shaft having only one brattice, and the drawing to be done on one side only. Now, Sir, I have been considering, and I do not believe it can be done by any means that would be practically useful. I believe the question must have been put by Mr. R. H. Hughes, to whose invention for forcing air into pits you have several times referred, and I wonder that practical men should give it any serious attention. We all know that since the Hartley explosion an Act of Parliament has been passed that not more than 20 persons shall be employed in any colliery with only one pit, so that even if these cross-way galleries could be ventilated as proposed, it would be no use, because the small number of men that could be employed would never pay for the trouble and expense. The only way of ventilating such places satisfactorily would be by pipes, as Mr. Hughes proposes, and for this reason—the pipes would be cheapest, and all arrangements would be equally useless when the workings had been carried on for six months, the cheapest should be adopted.

You must not, however, suppose that I would advocate the pipe-system, except as a temporary application—indeed, it would be as useless for ventilating a colliery in full work as a common house-bellows; but for sinking shafts and opening exploratory galleries, it might prove useful. With regard to ventilation generally, I think that almost every seam of coal requires some special arrangements, and that as a rule the colliery managers well understand their business. As to very fiery seams, I think the time will come when boring will be so cheaply and expeditiously done, that additional air-shafts will be able to be put down at a trifling cost, and that the airways will be so arranged that every five acres of coal may receive fresh air direct from the surface; and that a channel, never used as a travelling road, will be made to receive all the returns, and convey them over the furnace by a dumb drift. There would then be no need of safety-lamps, and the most fiery pit would be as fresh as the fields above it. If mine managers study how to ventilate working pits better, instead of wasting their time about cross-way galleries, which are never driven, I think it would be much better for the health and safety of—

A WORKING COLLIER.

## ON GOLD QUARTZ CRUSHING, AND GOLD ORES.

SIR.—Last week's Journal contained three papers of considerable interest to all capitalists who have embarked in this business, and are desirous of arriving at the truth on all points of importance in relation thereto. The papers referred to are—1. Letter from Mr. W. Reay, jun.; 2. Report of the Port Phillip Company, with valuable observations from Mr. Bland; and 3. Letter signed "Saum Cuique;" and are all deserving of notice, and entitled to consideration.

Separating for the present the mechanical from the chemical treatment of quartz and gold ores, Mr. Reay ably puts forward the advantages of "stamps" as a disintegrating power; and, if in the next or subsequent Journal, the patentees and advocates of other "crushers" fail to put in a satisfactory appearance as regards "bulk actually treated," we may reasonably suppose them defeated, *palmam qui meritum ferat!* Look to your laurels, Messrs. Cotttingham, Schiele, and all industrious patentees of the last decade! Mr. Cotttingham's improved amalgamator, successfully tried either 10 years ago or in 1862-3, may form the subject of another notice; but surely he, after perusal of Mr. Reay's letter, must be convinced of the difficulty of introducing novelty into the system of "pulverising," as practised abroad on bulk; and he will, probably, find that his suggested improvements have actually been for years, and are, in daily use for the crushing of certain ores in more than one part of the United Kingdom.

As regards the chemical treatment of gold quartz and ores, a fair and honourable opportunity is now afforded to Messrs. Mitchell, Longmaid, Price, W. Henderson, and many other patentees, to render an account of the (alas! commercial) value of the "talents" entrusted to them. Can they respond? Will they? But let each and all in their respective sphere accept the thanks of the community for any disinterested efforts to advance the cause of science, and still persevere.

Gold quartz yielding only an average of little over "½ oz. of gold" per ton has restored the capital of the St. John del Rey Company and the Port Phillip Company (from 60,000/- or 80,000/- each) "lost on other business," and enabled them to pay good dividends on their original capital, and to become popular on the Stock Exchange. Mr. Bland reports that in Australia the yield of gold quartz holds good in depth, and his remarks must tend to dispel the illusions that the value of quartz lodes or reefs (either for richness, poverty, or absence of gold) can be judged by the treatment of a few tons. A yield of ½ oz. of gold per ton amounts to a "single grain weight of gold in every 9 lbs. weight" of quartz on an average, and yet how many have pronounced quartz rich or poor on assays of 800 or 2000 grs., "not an average of bulk;" and gold being generally irregularly

disseminated, it stands to reason much quartz may contain no gold, whilst the bulk is valuable. How many thousands of pounds have been lost from non-observation of this fact? How many companies broken up whose prospects were really good? How many have been unjustly condemned, perhaps ruined, through the absence of the requisite knowledge, the greed of gain, the hasty temper of directors, secretaries, and shareholders? or, in other words, by the action and reaction of public opinion, to the formation of which they principally contributed.

Where is now the Colonial Company, formed under the management of Messrs. John Taylor and Sons, the Nouveau Monde, both with large capitals paid up, and a host of companies formed up to 1859? Is it not possible that some, if not many of them, would now have been flourishing had they followed the crushing of gold quartz and reduction of gold ores, for which they were constituted, with skill and perseverance? Shall such be the case again? or will due honour be at last awarded to, and confidence placed in, those (some of whom have had twenty or thirty years' experience in foreign climes, and may now happen to be in England) whose opinions on this subject are deservedly entitled to consideration, and amongst whom, without being invidious, may be numbered Dr. Percy, Mr. Warington Smyth, Mr. Evan Hopkins, Mr. J. H. Clement, Mr. Bland, Mr. Reay, Mr. A. Tregoning, Mr. T. A. Readwin, Mr. W. Morgan Brown, &c., whose names are familiar with the mining world either at home and abroad? May we not safely draw the conclusion that the crushing of gold quartz and reduction of gold ores by those who understand the subject, is a profitable and increasing business, but to a great extent dependent for success (as what business is not) on good management, under which conditions it is well entitled to public support.

Mr. Reay's comment on the probability of the combination of gold in a non-metallic state with another body, and the mineralisation of gold will, it is to be hoped, meet just attention in quarters where its consequence is recognised.

REVIEWER.

## ORIGIN OF GOLD.

SIR.—The following notes on this subject are extracted from the valuable report of the Geology of Vermont, by the Messrs. Hitchcock and Mr. Albert Hager, and may be interesting to the readers of the *Mining Journal* who have not had an opportunity of consulting the original work.

Gold has been found more or less in so many rocks, but its principal deposit all over the world is in metamorphosed Silurian, Devonian, and Carboniferous schists, frequently near their junction with eruptive rocks. Altered Silurian rocks are probably its most frequent position, and the quartz veins traversing these its immediate matrix. It is such veins traversing talcose schist that afford gold in the Ural Mountains, Australia, California, and the Appalachian Mountains of the United States. Gold occurs also in the schist itself, and this not unfrequently becomes decided mica-schist. It is in the talcose schist chiefly that gold is found in Vermont. It is found, however, in some quantity in gneiss at Bridgewater, and Danby Mountain in the region of talcoid slate and limestone; but generally it is in superficial deposits of coarse sand, gravel, and boulders, lying above the talcose formation, that any quantity worth working has been found. In Bridgewater a bed of quartz in gneiss has been explored, containing a small quantity of gold, but not enough to yield any profits. With few exceptions this has been found to be the case the world over. In the Ural Mountains only one quartz vein has been found rich enough to repay the expense of working, though it is thought the case is different in California. We are not certain of the existence of gold in the rocks in any other than a metallic state; it occurs, however, in minute quantities in galena, and in copper and iron pyrites, and it is probable that it exists in them in the state of sulphides. In such a case the oxidation of the sulphide would eliminate the gold, and water would remove it, and throw it into the form of alluvial deposits. But little gold has been found in the secondary and tertiary rocks, although the materials of which they are composed were obtained by erosion of the palaeozoic and metamorphic rocks. Hence Sir R. Murchison infers that the gold could not have been introduced into the palaeozoic schists till after the deposition of the secondary and tertiary rocks. He finds, moreover, that over a large area in Russia the palaeozoic rocks are not crystalline, and only slightly solidified, and that they contain no gold; whereas the same strata in the Ural chain, broken up and pierced by the eruptive rocks, and rendered crystalline, become highly metalliferous and auriferous. The facts adduced by Sir Roderick certainly make it very probable that gold was not introduced into the Russian rocks till the time of their metamorphism, which he would make more recent than the tertiary. Probably it was metamorphism that introduced this metal into other strata; but the period of metamorphism may have varied a good deal in different parts of the world. We have no means of determining the period in Vermont, only that it was probably more recent than the carboniferous period. But the most difficult point to settle is the manner in which gold has been introduced into the rocks. It could not, of course, have been introduced in its metallic state unless it were converted into vapour, and some have imagined it to have been sublimated from the intensely heated interior. But how that would disseminate it through quartz in grains too small for the naked eye, or, on the other hand, cause it to collect in nuggets of 40 lbs. or 50 lbs., is beyond our conception. It has been more plausibly suggested that the quartz veins containing the gold were injected from a molten mass beneath, through which the metal was diffused. But the idea of bringing pure quartz into a molten state in the earth is absurd, since the most intense heat scarcely melts it at all. Moreover, if we could in this way introduce the gold into the folia of the schists, where often it is found in large quantities. In short, we can conceive of no mode in which dry heat alone could bring up gold from the melted interior, and disseminate it through the rocks in a metallic state.

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runs nearly north through the State, passing out into Canada, in Troy and Newport; and the western range, which is wedge-shaped, having its point in Bristol, being widest at the Canada line, and uniting with the middle range north of Jay Peak.

These rocks are considered to be of Lower Silurian age, and, although called talcose schists, they contain but little magnesia. Besides gold, many other minerals are found in them, as magnetic, chromic, and specular iron, chalybite, red hematite, manganite, galena, blonde, native copper, rutile emerald nickel, psilomelane, quartz, and many anhydrous silicates.

Under somewhat similar circumstances to those which obtain in Vermont, gold occurs in North Wales. It is there found in quartz veins traversing talcoid schist of Lower Silurian age, and associated with tetradymite, galena, blonde, iron, and copper pyrites, chalybite, barytes, &c.

*London, Jan. 20.*

J. MORRIS.

#### IRON-MAKING IN YORKSHIRE, SOUTH WALES, &c.

SIR.—Under this title there is, in the Journal of Jan. 31, a letter from Mr. S. B. Rogers, of Newport, Monmouthshire, in which that gentleman states—"In South Wales good mine pig-iron may be made for 30s. per ton, and in some localities at even a less cost." Now, I have been a pig-maker all my life, but never having been in South Wales, and not having seen the "Treatise on Iron Metallurgy," to which Mr. Rogers so conspicuously alludes, I am unable to understand how it can be possible to produce mine pig-iron at such a startlingly low figure. I, therefore, ask Mr. Rogers to give through your columns, for the information of the trade in Derbyshire, particulars of his yield, based on *actual*, not theoretic, data.

*Feb. 4.*

A DERBYSHIRE PIG-MASTER.

#### SATHOSE IRON ON THE BRENDON HILLS.

SIR.—In the Journal of Jan. 17, I read a letter from Mr. Mushet, in which he says you have made an error in assigning to my late father (Mr. E. Rogers) the discovery of the spathose iron ore in the Brendon Hills, Somersetshire. Mr. Mushet also states that "the Flemings discovered and worked this ore about the time of the Crusaders," and that he (Mr. Mushet) used it, and offered it to Mr. T. Brown for the sum of 2000*s*. I was not before aware that my late father claimed the discovery of this ore, and was always under the impression that what he claimed was the development, and not the discovery. Whether my late father, or Mr. Mushet, or the Flemings, discovered this ore, there is no doubt but that my late father was the real developer of it, and the only one who brought it to any real use on a large scale. If Mr. Mushet claims the development, and knew the commercial value of this ore, it seems very strange that, after using it himself, and offering it to Mr. Thomas Brown, he should have let it go, and allow it to remain for others to work and derive benefit from. I think that if Mr. Mushet claimed the discovery or development, he might have done so during my father's lifetime; but, as it is too often the way of the world to "kick a man after he is dead," we can hardly wonder, or be surprised, at this strange conduct on the part of Mr. Mushet.

*Abercarn, Feb. 4.*

JOHN K. ROGERS.

#### YELLOW METAL GUNS.

SIR.—I observe that a correspondent of the *Times* alludes to the proposed introduction of the so-called "stero-metal," invented by Baron de Rosthorn, of Vienna. It is stated, upon no less authorities than the analysts of the Polytechnic Institution, at Vienna, and at the Arsenal, that the composition of the metal varies from copper, 55-04; spelter, 42-36; iron, 1-77; and tin, 0-88; to copper, 57-63; spelter, 40-22; iron, 1-86; and tin, 0-15; and it is stated that the difference in the proportion of tin varies considerably. If, then, such alloys have the great tensile strength claimed for them, and if the relative proportions of the several metals be as variable as inferred, I cannot understand why our British manufacturers should not find a large market for their yellow metal for gun-making purposes. The inventor proposes that heavy ordnance should consist of a tube of the stero-metal, surrounded by wrought or cast-iron, and the advantages claimed are facilities for manufacture and cheapness—neither of which claims I can attempt to deny.

But if this stero-metal be so remarkable as stated, why should not yellow metal, which would certainly possess much the same properties, be employed instead? Yellow metal tubes could be readily supplied in any quantities, and as the correspondent of the *Times* admits that "nothing short of repeated and searching trials with gunpowder will suffice to establish the suitableness of stero-metal for ordnance," why should not an attempt be made to benefit our home industry before patronising foreigners? Mr. Anderson, of Woolwich Arsenal, says, "So far as my present experience goes, we are still in want of the proper, the perfect, material for the interior of the bores of large guns." Now, I am of opinion that if any alloy of copper and spelter is to prove the proper and perfect material sought, a good yellow metal will be the alloy. There are ample facilities at Birmingham for testing the accuracy or inaccuracy of my supposition cheaply and indisputably, and considering the benefit which might result to the town generally, I think that the subject is one which should not be lost sight of, either by the gunmakers or the yellow metal manufacturers.

*Birmingham, Feb. 2.*

CUPRUM.

#### PATENT LAW AMENDMENT.

SIR.—I have just had the advantage of perusing the circular issued by the "Inventors' Institute" upon the subject of Patent Law Reform, and was much pleased to see such an excellent list of names included in the council, but I am compelled to say that there are some points in the report upon which I differ from the views of the Institute, and believe that inventors generally would differ from them. Firstly, as to the appointment of a board of investigators, I consider that such a body would prove most prejudicial to the interest of inventors—the inventor being undoubtedly the best judge as to whether his invention is worth patenting, and the only party who can loss if he is proved a plagiarist. Next, as to granting patents for not less than 21 years, I consider that it is a modification not required, more especially as inventors could not reasonably hope for protection for 21 years at the same price as for 14 years. It is much better as it is, that the grant be made for 14 years, and then extended, if cause be shown, for another seven years.

That the fees might be reduced to one-half I readily admit, and I maintain that in proportion as the earlier fees are reduced, so will the returns to the revenue increase. At present the total fees payable to the Government, during the 14 years continuance of the patent, is 175*s*., of which 25*s*. is payable in the first six months; 50*s*. at the end of three years, and the remaining 100*s*. at the end of seven years. Now, a poor inventor cannot afford to pay 25*s*. in the first six months, though many can get together 5*s*. and hence it is that so many inventions receive provisional protection only. Now, if instead of five 5*s*. payments during the first six months, they were reduced to five 1*s*. payments during the first six months, they would be in a position to protect himself for a sufficient time to enable him to secure assistance to carry out his invention. Let the tax, then, be 5*s*. per year, payable in advance, for the next six years, and 10*s*. per year after, and every facility would be offered for carrying out successful inventions; less loss would result from unsuccessful inventions; and there would be fewer abandoned inventions, bearing the appearance of being protected. This, I conceive, to be important, because there are many processes which, although the inventor cannot perfect and profit by, others would take up and work if they were not trammelled by the Patent Laws.

The Inventors' Institute proposes five 2*s*. 10*s*. payments in the first six months, but this is too much, and I believe that it is only patent agents, who usually charge an amount equal to the Government fees for lodging the papers, that would advocate such fees during the earlier existence of the patent. The fees I propose leave ample margin for increased labour and fees in the commissioners' office, as it will be seen that the Government will receive 105*s*. during the 14 years of the patent. By making each yearly instalment payable by "notice to continue" on a 5*s*. stamp, however, the amount of labour in the Patent Office would not increase, except in proportion to the number of patents granted.

With regard to the proposition of the institute in question—that the patent should include all Her Majesty's dominions, it is impracticable, and would be very unsatisfactory in its operation; for, although it might in certain instances prove advantageous to the British inventor, it would lead to continual litigation, where an exclusive right was granted in a colony (which patent would, of course, have to apply to the mother country and all her colonies) for an invention new in such colony, but old, or at least known, elsewhere. The granting of separate patents, as at present, cannot be improved, for any such modification as that proposed by the Inventors' Institute could only have the effect of hampering trade, and inducing unnecessary litigation. There are other points in the report which might be contested, but I trust I have written enough to show that the Inventors' Institute puts forward such views that it cannot hope to obtain the co-operation of in-

ventors generally, either in the mother country or in the colonies, and that no single individual (unless, perhaps, the patent agents) would benefit by the consummation of its proposition.

AN INVENTOR.

#### THE MERCANTILE MARKS ACT.

SIR.—The Mercantile Marks Act of last session, having in consequence of the provisions it contains as to the false marking of patent and registered articles been already noted by me in your Journal, has further engaged my careful consideration, which induced me to analyse its provisions; and, as, it comprises many points of moment to manufacturers, and those engaged in trade and commerce, I forward the subjoined brief abstract of it.

*London, Feb. 4.*

F. W. CAMPIN.

SECTION I.—Construction Clause: "Person" to mean any person, "the subject of Her Majesty or not;" also "body corporate," or "of the like nature," constituted by the laws of "this country," of "Her Majesty's colonies or dominions," or "of any foreign country," including "any company, association, or society of persons of which the members, some or all, are subjects of Her Majesty or not," and this whether "established" or carrying on business within, or partly within, Her Majesty's dominions or elsewhere. Mark to include any "name, signature, word, letter, device, emblem, figure, seal, stamp, diagram, label, ticket, or mark of any other description." And Trade Mark to include the same when "lawfully used by any 'person' to denote any chattel or (in Scotland) any article of trade, manufacture, or merchandise, to be an article or thing of the manufacture, workmanship, production, or merchandise of such person;" or to be an article of any peculiar or particular description, made or sold by such person, and shall also include any name, signature, word, letter, number, figure, mark, or sign, which, in pursuance of any statute or statutes for the time being, in force, relating to registered designs, is required to be used. In Scotland *misdemeanour* to include "crime and offence," and court to include "any sheriff or sheriff substitute."

2. Forging or counterfeiting a trade mark, with "intent to defraud, or to enable another to defraud," applying or causing same to be applied falsely, including the application of "any trade mark or any forged or counterfeited trade mark" to any "chattel or article" not being of the "particular or peculiar kind" intended to be denoted thereby, to be a *misdemeanour*, and subject to the penalty of forfeiture to Her Majesty of "every chattel and article belonging to the misdemeanant bearing the forged, counterfeited, or falsely applied trade mark." Also the forfeiture of every instrument in possession or power "of the misdemeanant by which the trade mark, or forgery, or counterfeit thereof has been, or can be applied." And the same may be destroyed or disposed of by order of the Court.

3. Every person who, with intent to defraud, or to enable another to defraud, shall apply, or cause to be applied, any trade mark to any cash, bottle, stopper, vessel, case, cover, wrapper, band, reel, ticket, label, or other thing, in, on, or with which any chattel or article shall be intended to be, or shall be, sold, uttered, or exposed for sale," or intended for any purpose of "trade or manufacture." And any use or adoption of a forged, counterfeited, or falsely applied trade mark, or the procuring of the same, is declared a *misdemeanour*. And the offensive chattels, articles, casks, bottles, and other things mentioned in this section, and the instruments used in violating the same, are to be forfeited, as in section 2, and may be destroyed or disposed of by order of the Court.

4. After Dec. 31, 1863: Selling, uttering, or exposing for sale, or for any purpose of trade or manufacture, with guilty knowledge, any chattel or article with forged or false trade mark, to be subject to a penalty for each offence of a sum of money equal to the value of the article, and a further sum of five pounds, and not less than ten shillings.

5. To aid, or in any way incite, and genuine trade mark, or to cause or procure the doing of these acts, with intent to defraud, is subjected to the provisions of the Act, as forged or counterfeited trade marks.

6. After Dec. 31, 1863: Any person whose trade mark shall have "been forged or counterfeited, or used without lawful authority or 'excuse,'" may "demand in writing" from the offender, or supposed offender, that "full information in writing of the name and address of the person from whom, and the time when, any chattel or article falsely marked shall have been purchased or obtained," which information must then be ordered within 48 hours after such demand. And parties refusing to give information constitutes *prima facie* evidence that the person refusing, or neglecting, had full knowledge that the trade mark was false.

7. Marking, with intent to defraud, any false indication of "quantity" or "weight," or of "place or country," or marking falsely *patent, copyright, or registered*, is subject to a penalty of a sum equal to the value of the article marked, and also of from ten shillings to five pounds.

8. And after Dec. 31, 1863, to sell, utter, or expose for sale, anything with false-marked quantity, weight, place, or country, is subjected to a penalty of from five shillings to five pounds.

9. But it is provided that false names or words generally used on certain classes of articles are not to be within the scope of the Act.

10. In indictments and legal documents the words "trade mark" shall be sufficient description.

11. Proceedings or convictions under this Act not to affect proceedings at law or in equity to which parties may be entitled.

12. The intent to defraud some particular person need not be alleged or proved.

13. Persons who aid and abet in *misdemeanours* under this Act also guilty of *misdemeanour*.

14. *Misdemeanours* under this Act may be punished by *fine, or imprisonment for not more than two years (with or without hard labour), or fine or imprisonment alone.*

15. 16. Recovery of penalties may be effected in England, Wales, or Ireland by an action of debt in any Court of Record, or by summary proceeding before two Justices of the Peace (which by sect. 16 is "to be had according to the provisions of" Act 12 Vict., cap. 49), or in Ireland by Civil Bill in the Civil Bill Court, in Scotland before the Court of Session, or by summary action before the Sheriff.

17. In actions penitentiary to be accounted for in like manner as other monies payable to the Crown, and plaintiffs to recover "all" costs of suit, "which shall include a full indemnity for all costs and charges which he shall or may have expended or incurred in, about, or for the purpose of the action, unless the Court or Judge thereof shall direct the costs of the ordinary amount only shall be allowed."

18. Limitation of actions, and proceedings to "three years next after committing of the offence, or one year next after the first discovery thereof by the person proceeding."

19. After Dec. 31, 1863: Vendor of an article with a trade mark to be deemed to contract that the mark is genuine, "unless the contrary shall be expressed in some writing, signed by or on behalf of the vendor, and delivered to and accepted by the vendor."

20. Repetition of this enactment (sect. 19) only applying its effect to "any description, statement, or other indication of or respecting" "number, quantity, measure, or weight."

21. In suits at law or in equity against persons for using forged trade marks, Court may order articles to be destroyed, or otherwise disposed of, and may award injunction.

22. Persons aggrieved by forgeries or false uses of trade marks may recover damages against the guilty parties.

23. Defendant in any "action," "for or on behalf of Her Majesty," if obtaining judgment, to have full indemnity for all costs and charges thereof, unless the Court or Judge shall direct ordinary costs only.

24. And a plaintiff suing for a penalty "on behalf of Her Majesty" may be compelled to give security for costs.

25. The Act is not to affect the Cutlers' Company of Sheffield.

26. "The Merchandise Marks Act, 1862," to be a sufficient description.

#### THE FUTURE OF AMERICA.

SIR.—The manufacturers of New England must spread over all those States suitable to their craft, or be rejected of all, as an incubus. Of the thousand points mooted, and to be so, for "reforming" the States of America, by lines "direct or crooked," the possession of the coal of the elder free States (there being none north of Pennsylvania) is, perhaps, the most important, and that (as regards the steam communication with the world) limited to anthracite—an account of the absence of smoke, made contraband of war. Though Cotton be not *king*, Coal will be *queen*, in those States. The manufacturers of New England and sea steamers are dependent on Pennsylvania coal, and without it no amount of tariff on importations will enable them to go on. The winter price, 2*s*. per ton, on an average, retail, has heretofore pressed so heavily in that cold climate on the workman and works, that it was nearly equal to the cost of bread of a moderate family in England, and induced the owners of a new cotton factory to propose that a party take a half in it to find money to remove it to the coal, cotton, food, and goods market West. In other words, New England (the chief obstacle to settlement, or separation) is totally at the mercy of Pennsylvania, for coal, as of the West for food, and the South for cotton. The statement lately in the *Times* that the vegetable mould is *gone* "from Maine to Florida," and the speeches of Mr. Morrill, of tariff note, in Congress, from the statistics of each of the thirteen original States, that the crops of wheat (for merly or par with those of Britain) are now in the States which have not given up its culture entirely only one-third what they were, or 8 bushels per acre—a yield which, sold in flour at the door of the mechanic from the farmer's wagon, is inadequate to the payment of the labour employed (leaving *rent* and taxes out of the question), is a fact feature in the supposed "riches" of the free States. The condition of, and management on, the farms of the State (dry and sandy) is well shown by the number of sheep per acre. Mr. Morrill proves that, on about double the number of cultivated acres, there are, in the State of New York, fewer sheep by 300,000 than 30 years ago, and with a heavy tariff, long previous to the war, on foreign wool. A spade, or other implement, is a living, provided a man work it, and is an American farm; but, in general, it is as hopeless and profitless to let a farm as to expect rent from the spade. Not one farmer of the hundred tenants there intends to remain; his object is (at the cost of the soil) to make in two or three years the money to *buy*, at the Government price (4*s*. per acre) in the West, although there, with vegetable soil said to be inextinguishable, he has the drawbacks of half price for grain, pork, &c., want of timber for fences or fuel, bad air and water, &c. A thousand miles of conveyance of wheat by rail, at 3*s*. bushels to the ton and 2*s*. per ton per mile (the average) takes the whole value of wheat in the old States. There will soon be some hundreds of miles railway charges for wheat to the Lakes, or to the York and Erie Canal, or rail; thus the "Great West" cannot become united to the North so as to become *one* rich, or assist by cheap food the manufacturers of those States. The produce of the West will, rather, by the vast steamboat conveyance, avail the South. The coal of the South and West may serve for manufactures, but is very inferior generally; that of Pittsburg (Pennsylvania) is taken by boats a couple of thousand miles down the rivers, though they have coal near St. Louis, &c.

Pennsylvania, "the key-stone" State, is, in fact, the key of the free States, with manufacturing pushed, as it ought to be, to the *exporting* point in that State, New York, New Jersey, and probably others, east, west, and south, the question of Tariff on importations would cease. As to the military power of the free States, the statistics of the Mexican War, published about seven years ago, by order of Congress, might have warned the country, or prepared it for what has occurred—5000 deserted, and a greater number were discharged on the march. Taylor's army lost only about 1000 men killed in action, yet did all the fighting, and he was made President. Scott, tramped up as equal to Wellington, had of a much larger army, only 140 men killed.

Several attempts were made in Congress to stop the supplies of the army. An order sent General Jackson to disband his army thousands of miles from home he disregarded. In place of the rate of pension in England, ample support for the old soldier for life, there was about five years ago a debate in Congress relative to the Land Warrants, due to the soldiers of 1812, nearly all of whom were, of course, dead. I was offered some of those warrants at their market price, under 12*s*. for 60 acres, usually costing the soldier more than it is worth in getting "set out" by the surveyors—not equal to one year's pension of the British soldier. Contractors in the favour of the Government were allowed to wrong the army in every necessary, consequently they were only the friends foreigner or unruly Yankee "rowdy" in the ranks. The officers elected by such men, or appointed by the Government on account of political influence, was the data on which I warned my connection to have nothing to do with the war. As pride, conceit, and rascality unfit individuals for anything useful, so must it nations. Their boasted school

system is a nursery of disorder and defiance of authority; if the master whips the parents whip the master.

The free States being, by their climate, a "half year's country" in nearly every description of labour, poverty is entailed on the industries of city or country, despite their nominal high wages. The regular policy of employers is to rely upon the "ready-made" workmen of Europe. Youths or aged men are not found in their shops, &c. The former are too independent and unruly, and are left to become "rowdies," or, as they pretend, to do "better" than hard labour." In proof of this, the President Lincoln is the only American who stooped to the wheelbarrow on their greatest work—the York and Erie Canal. Then, although idle half the year, the foreigner of 40 years of age is told, "We pay high wages, and cannot employ aged men." After 14 years spent amongst them, I am at a loss as to what becomes of the aged—the Yankees coolly tell them they are at that age "to have saved sufficient for life." The only good trait in the American character, or good custom

are locked away calls will be made, and must be paid. Such mines should be selected as are fully supplied with machinery, and which have a great deal of work done.

I will conclude by saying that if all speculators were to adopt my system it could not be carried out successfully, and their only chance of gains by mining would then be from what Mother Nature may give them from the bowels of the earth, which is, after all, the only legitimate method of mining. Still I am so well acquainted with human nature that I am convinced no above one in a hundred will have the resolution to sell at a small profit, when a brisk demand exists for their shares, caused entirely by market operations. No; they will wait for the top price, and wait too long. My system will, therefore, be adopted by only a few, and those few will not, I am confident, regret it.

A CAUTIOUS MAN.

#### MINING AS A SPECULATION.

SIR.—Your able correspondent, "A Cautious Man," in his letter published in last week's Journal, advances a statement which, whatever might be its effect upon the old speculator, is, I fear, calculated to deceive many a young one, who, possessing the capital and desire to speculate, lacks the great essential—experience. "Sell when you can get a profit," says "A Cautious Man." Sound advice this, to which many besides myself can testify, and a pity it is not more generally adopted. The greatest mistake, next to buying at too high a price, is holding on too long. But does it follow that by this method of purchasing into "good and safe mines" at, or below, the average price, and invariably selling when they go 5 or 10 per cent. above it, that we thus ensure a profit of "from 20 to 40 per cent." With all deference to the experience and judgment of "A Cautious Man," I venture to say "No."

Let a speculator select his shares ever so carefully, it is too much to reckon upon selling them all at profit. Out of (say) a dozen well-chosen, "good and safe mines," one, two, or even three may, and probably will, turn out a loss. As many more may hang on to their hands before even the minimum profit can be realised. He sells the rest at the maximum profit—10 per cent.; and does he find this, with his dividends, if any, cover losses and calls, and give a result anything like that predicted by "A Cautious Man?" I fear not.

To sell at a small profit and buy again is an excellent rule, but, like others, has its exceptions; and I would say to the young speculator—"If one or two of your mines appear more flourishing than the rest, begin to advance in price, and go to the stipulated 10 per cent. beyond cost price, and if, further, you find this rise is not the result of market operations, and that the prospects for the future are extremely good, then do not sell, pay a call or two, if a progressive mine, and the chances are, instead of 5 or 10 per cent., you may realise from 50 to 100—a large profit, though by no means an uncommon one; and such profits must occasionally be made to cover the losses we all know to be incidental to, and inseparable from, this class of speculation.

Whale Grenville, the mine to which "A Cautious Man" alludes, affords me an illustration: 18 months ago I bought a good interest in this mine at 17. 12s. 6d. per share. When the shares went to 21, I was advised to sell. I declined. Then they fell to cost price; calls came, and reproaches ad lib. from two of my friends for not having sold, as they did, and been content with the profit; but I held on bravely until the end of last May, when I sold, and a glance at the Journal of that period will show the brilliant result. Some of my shares, of course, turned out a loss, but on making my usual calculation at the end of Dec. I found my profit on the year's transactions to be exactly 30 per cent. —Feb. 4.

A CAREFUL MAN.

#### SILVER VINE MINE, AND ITS MANAGEMENT.

SIR.—I was sorry to read the remarks of Mr. Squire, at the meeting of shareholders, reported in the Journal of Jan. 21, as being directed against Capt. Burn. Practical men of great experience are pleased with what Capt. Burn has done, and thinks the change of affairs a salvation to the company. What can be a better proof of this feeling than to see such men, residing here, coming forward to buy shares? This never took place during Mr. Squire's management, for the truth is no one here ever believed in the miraclos about to take place at the "reduction-works." Mr. Squire undoubtedly is very clever for some things, but I do not hesitate to say that his knowledge of mining, minerals, &c., appeared to be so limited as to surprise us Cornishmen that he should ever have attempted to meddle with anything of the sort. A "ba girl" at our mines could have given him an wholesome lesson, by teaching him how to distinguish schorl from wolfram, and such information at one time during his stay in Cornwall would have been of great service to him (this is well known to Mr. Squire). Now, is it not surprising that he should taunt Capt. Burn with ignorance, and yet possessing so much himself? Besides, his failure of producing silver worth 5000/- to 1000/- per ton, as he promised (many tons), is quite a proof of the above, as when at last the ore (or rather the slag) was sold, a few tons making 81. 12s., and the greater bulk 37. 13s., after the enormous cost of preparation for that market. The ore now is raised and made ready for sale at a trifling cost per ton. Such a contrast to the former management probably is not very pleasing to Mr. Squire, but I was glad to find it met with the approbation of the directors, and especially our worthy Chairman. This mine is good, and is improving, and I hope the ore will be sold in its natural state, and I have no fear of the result.

LONDON, Feb. 4.

A SHAREHOLDER.

#### THE CARDIGANSHIRE MINE, SILVER MOUNTAIN.

SIR.—It seems to afford Mr. Naysmith peculiar satisfaction to break a lance with me on the subject of the Cardiganshire mines; and if this passage of arms can afford him any amusement, without being detrimental to the columns of your Journal, I do not see why I should withhold him the gratification. I would, however, advise him to buckle his armour a little more securely, as it is dangerous to have it so loosely fastened that one's opponent can easily strike through it at a glance. With reference to the dressing at the Silver Mountain Mine, most people are all acquainted with the subject are aware that in almost all deposits of ore there are certain quantities of it that scarcely require any dressing at all, and in this mine the metallic formation is so rich that four men working underground, and two women at surface, used to prepare the ore for market when it was worth 14/- per ton at a cost altogether of 51. 10s. per ton. At Goginan we used to sell ore periodically before any machinery was erected, and at Brynamour we have just sold 20 tons of ore to Messrs. Sims, Wiliams, and Co., in lumps, without crushing, at 14/- per ton. If you find your bread ready for use on the bread fruit tree you do not require mills to grind the flour, or hands to mould it into loaves. We are, however, preparing steam machinery for grinding those parts of the lodes that are not readily re-ducible by hand labour.

Notwithstanding Mr. Naysmith's doubts of my assertions, I can assure him that it is perfectly true that I reopened the Goginan Mine when it was quite an isolated spot with respect to water-power, and that it was at my own suggestion, and by my own levelling, that the water was brought down to this mine from the River Camddwr, at the foot of Plynnimon, a distance of several miles. It was to me, and me only, that the credit, if any, is due for bringing the water from the Llynnyrddian Lakes to the Lisburne Mines, which were almost devoid of water before. It is more easy to understand the theory of profitable mining in Cardiganshire now than it was 30 years ago, when such problems as these, the construction of the best mills and the mode of washing the ore, had to be solved. With these examples before us, it is no more difficult to see one's way from the beginning to the end through the matter than it would be in an old established workshop, with the models and workmen before you, to understand the designs they are carrying out; but it would be quite a different thing if you were called upon to originate these models, and to work out the elements of such designs. When we have completed our arrangements at Silver Mountain Mines I hope that Mr. Naysmith will have reason to be satisfied, although I have never heard that Mr. Naysmith had anything to do with it in any way whatever.—London, Feb. 6.

MATTHEW FRANCIS.

**SMELTING POOR COPPER ORES.**—At Adelaide a company has recently been formed, with a capital of 50,000/-, in shares of 10/- each, for developing the invention of Capt. H. V. Rodda, to which we have on several previous occasions referred. Capt. Rodda's invention is based on the circumstance that copper melts at 2000° Fahr., while most ores require 3500° at least. The present furnace at the New Cornwall Mines is constructed with three soles, or floors, on the top floor, which is, in fact, the roof of the furnace below it. The ores are first placed to be dried and heated by the super heat of the fires underneath. The hot ore, broken to about  $\frac{1}{4}$ -in. gauge, and mixed with about an equal quantity of charcoal, is then let down on to the middle floor, when it is raised to a dull red heat. Communication with the outer air is then shut off, and the combustion of the charcoal is only sustained by the oxygen contained in the ores themselves. In parting with its oxygen the metallic portion of the ore is converted from its friable and compound state into a simple and metallic condition, and, at this stage of the process, the charge is let down into the lowest furnace, when the heat is increased till the metal is thoroughly fused, the particles of the metal being found to run together into granules under the influence of molecular attraction. The furnace process is then completed; the charge is drawn, the unconsumed charcoal is separated from the ore by flotation in water, and the granules and metal from the stone by crushing and washing. The crushing and washing are estimated to cost about 5s. per ton with proper machinery, and, even with the rude appliances hitherto available for this purpose, the copper left in the tailings after washing is found to be less than one quarter per cent.

**THE NOVA SCOTIA GOLD FIELDS.**—A correspondent of the Halifax Chronicle, writing from Goldenville, gives a statement of the quartz crushed by the Floton crusher, and the results. The quantity, 455 tons 15 cwt. Yield of gold 1180 ozs. 5 dwt. 17 grs. The letter adds: The probable amount of gold produced from other crushers, washings, &c., is about 965 ozs., which, added to the above, gives a total of 3145 ozs. 5 dwt. 17 grs. This will amount, at 219 per oz., to the sum of \$40,000, and is considerably more money than has been spent here in mining operations up to this date, considering the amount of money wasted in the early part of the season by persons too eager to make sudden fortunes, rushing into the business without knowledge or experience. Six months' experience, however, has taught us some wholesome lessons, and capital can now be laid out to much better advantage, and, no doubt, when the real facts with reference to the value of our quartz is more generally known, capital will be more readily invested.

**RAMSAY LEAD MINE.**—This valuable mine is now in a fair way of receiving the amount of development to which it is entitled, arrangements having been made for its disposal to a company forming in England to purchase and work it. The price to be paid for the mine, 25,000/-, is considerably less than mineral properties in the eastern townships with poorer prospects have been recently sold for to the American capitalists, who are acquiring all the more valuable mining lands in that portion of the province. The Ramsay is the only lead mine in Canada that has smelted and sold metal, and during the short time it was worked by the former proprietors it raised more ore than has been got from all the lead mines in the province put together; the ore occurring in large lodes of calcareous spar, so soft as to require no powder in the working. It is the opinion of geologists and mining engineers of the highest rank who have inspected the mine that with the expenditure of a moderate capital in sinking the shafts already opened to an adequate depth, the Ramsay will become one of the richest and most profitable lead mines in the world, more than adequate to the supply of the large consumption of this province, which is now obtained from abroad, as it was at surface undoubtedly the richest mine ever opened in America, not excepting the Rossie, on the south side of the St. Lawrence, and in the same formation, which yielded the first adventurers a profit of \$2,000,000, and was the chief source of the great wealth of the Parish family.—Montreal Commercial Advertiser, Jan. 23.

**LONDON GENERAL OMNIBUS COMPANY.**—The traffic receipts for the week ending February 1 was 10,289. 2s. 7d.

**THAMES TUNNEL COMPANY.**—Receipts for the week ending Jan. 31 341. 7s. 4d.; number of passengers, 20,248.

**HOLLOWAY'S OINTMENT AND PILLS—DECLINING HEALTH.**—The first symptom of departing health should have instant attention and redress, not only for the comfort of the present, but for the happiness of the future. Whatever be the irregularity, wherever situated, however masked, Holloway's remedies will reach it and remove it. The external employment of the ointment over the part affected, and the internal use of the pills will always restore order and ease. Skin diseases, want of appetite, nausea, and biliousness are immediately cured, and healthy functions permanently restored to each organ. The united action of Holloway's remedies over the humane frame is so singularly searching, soothing, and curative that few diseases can long withstand the thorough purification they constantly bring about.

#### Meetings of Mining Companies.

##### MARIQUITA AND NEW GRANADA MINING COMPANY.

The ordinary half-yearly general meeting of proprietors was held on Jan. 30, at the London Tavern,—Mr. ROUTH in the chair.

Mr. JONES (secretary) having read the notice convening the meeting,

The CHAIRMAN said the proprietors were aware that the present was not

the annual meeting, at which the regularly audited accounts were presented, but the

half-yearly meeting, held for the purpose of submitting a statement of the company's opera-

tions for the six months, and to show, as far as possible, its financial position. Before,

however, entering upon those matters he had to congratulate them upon what they

must all consider a most satisfactory feature—he alluded to the cessation of hostilities

in New Granada. By the advices from Panama (*via* New York), to Oct. 15, the news

of the victory of Mosquera's forces over the combined chiefs of the revolutionary party

was confirmed. The New York papers of Oct. 24 state that Mosquera had quite estab-

lished his Government throughout the United States of Columbia; but that, on the

18th ult., the Conservatives, under several of their generals, 3500 strong, attacked the

part of Mosquera's forces under Santos Gutierrez, who was strongly entrenched at La Barbara. The result was the total rout of the former, the capture of a large num-

ber of prisoners, and the death of their leader, Giraldo, to whom it had been principally

owing that Antioquia had not entered the Union. That state, as well as caucu-

s, would now become incorporated under Mosquera. The letters received by the West India mail

completely confirm the advices from New Granada, *via* America, that Mosquera's Gov-

ernment had been everywhere successful. It was, therefore, clearly shown that now

—and without which the company's works could not be carried on effectually—the power

of the country had been established. He then read some extracts from letters received

from the company's agent, which stated that, with the exception of a supply of powder,

everything was in a satisfactory state, and that there was every reason to believe in a

speedy restoration of the establishment to a highly profitable condition. Referring to

the Santa Ana Mine, it was stated that the lode in the 120 continued good between the

north and south levels, that the ground was in easier driving, that they were getting

some grey silver of a better quality than anything yet raised at that depth, and that

they were supplied with funds. He then proceeded to give a statement of the costs and

returns (as far as they could be made up) of the different mines. With regard to Santa

Ana, the quantity of silver obtained from April to August, 1862, had been 34,596 ozs.,

the costs had been \$52,471, and the returns \$54,056. With regard to the Marmato

Mine—the communications with which had been very irregular—the quantity of fine

gold obtained from Feb. to May, 1862, had been 466 ozs., and of silver 284 ozs.;

the costs had been \$18,965, and the returns \$11,996. By the costs and returns of the Marmato

Mine, it would appear that their operations upon that portion of the company's property

were not being conducted at anything like a profit; but he reminded the meeting

that there was a considerable quantity of ore not realized, estimated at about

\$3000, and he hoped, when the regular advices were received, that it would be found

that, although Marmato was in the midst of the revolution, the loss would not be so

great as might have been imagined, if, indeed, there had been any loss upon it.

As regards the financial position of the undertaking, he might inform proprietors that the

available assets in New Granada on Nov. 13 amounted to 10,233/-, and that the balance

in London on Jan. 1 amounted to 3950/-; but there was owing in London £50,000, —therefore

he might safely say that they had a working capital of between 7000/- and 8000/-.

He might mention that the reason there was a debit balance on this side was owing to the

fact that the remittances from the other side had not been to the same extent as the

expenses on this side. The expenses had been considerable—miners and machinery had

been sent out; but, on the other hand, they saw that in New Granada the assets were

quite equal to what they were, even including the above-named liability; upon the

whole, therefore, they were quite in as good a position as when he last had the honour

of addressing them. As regards the mine itself—he referred to Santa Ana—he had

much pleasure in stating that the deeper the explorations were extended the richer the

mineral became. When he met the proprietors this time last year he told them that the

new shaft—which had incurred a heavy outlay—had been completed to the 60, and that it had been

hoped to be "hollowed" to the 100; but he had now the pleasure of informing them that

that this great work was very nearly completed to the 100 fm. level, for it was

completed to that depth with the exception of about 8 fms. of "trimmings"; and, as the

advices last received were dated some three months since, he thought he could now safely

say that the full-sized shaft was completed to the 100 fm. level. The directors had ordered

a white and water machinery to be sent out, which, when erected, would enable them

to extract the mineral by means of the new shaft. Notwithstanding the abstraction

of labour by the revolution, this great work was in a first-rate position; but they

would have to sink yet 20 fms. before they would derive its full advantage—still there

would be an incalculable advantage in raising minerals by "skips," even to the 100 fm.

level; therefore, it was a subject of congratulation that this shaft, which had been cut

through solid rock, was so near completion. (Hear, hear.) He believed that in six or

eight months the machinery to which he had referred would be sent out, and the







occasional stones of tin, but not of much value; the ground is clearer of spar, and looking kindly for the production of tin. In the same level, east of shaft, Allen's branch is yielding a little low-price tinstuff. In the 123, east of the same shaft, Allen's branch is worth 25s. per fathom. The winzes sinking under the same level, on Allen's branch, is worth 6s. per fathom; we expect this will be communicated with the level below next week. In the 113, east of the same shaft, Allen's branch is worth 20s. per fathom. The stopes in the back and bottom of the same level, on Allen's branch, are worth, on an average, 12s. per fathom. In the 103 cross-cut, south of Allen's branch, towards the engine lode, the ground is a little wetter. The stopes in the back and bottom of the same level, on Allen's branches, are worth on an average 10s. per fathom. There is no change to notice in the cross-cut north of the same level, towards Allen's branch. The men are now engaged opening the new engine-shaft in the 113 fm. level for main-roads, &c.

**WHEAL UNITY CONSOLS.**—W. H. Reynolds, Feb. 3: There is no change of importance since my last. We are pushing on three or four points referred to in that report as fast as possible, and hope soon to have to report of a discovery.

**WHEAL UNY.**—M. Conde, M. Rogers, Jan. 31: Tin Lode: The engine-shaft is sunk to the 110, and we have set to cut a plat by nine men, at 10s. per cubic fm. The 100 is driving west of engine-shaft, by four men, at 7s. 10s. per fm., worth 16s. per fm. for tin. The 90 is driving east of engine-shaft, by two men, at 3s. per fm., worth 7s. The 60 is driving west of incline shaft, by four men, at 6s. per fm., worth 7s. Copper Lode: The 48 is driving west of No. 3 shaft, by four men, at 6s. 10s. per fathom; the lode is producing stones of copper ore, but not enough to value. The 58 is driving west, by four men, at 4s. per fm.; the lode is of a promising character to improve, composed of quartz, mica, and copper ore, but not to value. The 58 is driving east, by two men, at 6s. per fathom, worth 16s. per fm. for copper and tin. The lode in the winze is sinking below the 58, west of No. 3 shaft, is worth 12s. per fm.; this winze we have suspended for the present, and have put the men to stop the back and rise to hole in the winze east of shaft. The new engine-shaft is sunk 34 fathoms from surface; sinking by nine men, at 23s. per fathom.

**WORVAIS DOWNS.**—H. Harry, Feb. 4: All our operations are in regular progress, and no change of importance has occurred in any part of the mine during the past week. Our month's sale of tin will be about 3*1/2* tons.

**YARNER.**—R. Barkell, Feb. 4: The engine-shaft is being sunk below the 40 as fast as possible; the ground is congenial for copper. No improvement in the 40 west. The eastern stope is not looking quite so good. The western stope is looking well, and maintains the late improvement, and is still yielding from 3 to 4 tons per fathom. The pitch at the 40, east of shaft, will yield 2 tons per fathom. The lode in the 30 west, on north lode, is 1 foot wide, but poor.

**MINERS' ASSOCIATION OF CORNWALL AND DEVON.**—The general meeting of subscribers and supporters of this association was held at Redruth on Monday. Mr. Hunt read the report of the council and the financial statement, which showed a debit balance of 25*1/2*. 10s. 8d., the debit balance brought forward from the previous year being 18*1/2*. 5s. 4d. During the year the progress has been, on the whole, satisfactory. Mr. F. H. Trevithick remarked that reference to the teaching of dialling, surveying, assaying, &c., any one of which is found by experience to take a person's whole time and attention to acquire a competent knowledge of. He did not discover that the working miner had been brought to appreciate the benefits or usefulness of the association; it had occurred to him whether it would not be desirable to offer prizes. Mr. R. T. Grylls stated as one reason why miners do not avail themselves of the advantages of the association is, that they do not as a class see the advantage of the knowledge which it professes to impart; and how should they? They do not find that knowledge is a stepping-stone to promotion. They do not find that the instruction which is afforded here is any stepping-stone to situations in the county. A grand stimulus would be given to the miners if it could be shown that by their acquiring a certain amount of knowledge the door which led to the situations available on the mine would be thrown open to them. It has not been so, however, nor have we any reason to hope that such will be the case. If it had been so, working miners would have overcome all difficulties, and would soon have made themselves masters of all the association can teach. It was of opinion that if greater encouragement were shown to the miner, and the present system of obtaining situations by influence were abolished, the association would receive a much larger amount of support from working miners generally. Mr. Hunt, in replying, stated that the association never contemplated or desired to make persons attending the classes scientific chemists or mineralogists, but only to place in their hands the tools and the knowledge which would enable them to detect the character and quality of the ore that may be brought within their reach. As an illustration of the disadvantage and positive loss which the working miners often suffered from the want of this knowledge, he stated that a Cornish miner, who was working abroad, had sent him 3 lbs. weight of what he called "native lead." On subjecting it to the blow-pipe, however, he found that it was chloride of silver, worth many pounds, and the locality where it was found was now being worked for silver. Mr. J. St. Aubyn, M.P., Mr. Cady, the Chairman (Mr. Charles Fox), Mr. Hunt, the Rev. J. Bannister, and others having addressed the meeting the proceedings terminated.

**INSTITUTION OF MECHANICAL ENGINEERS.**—The sixteenth annual general meeting of members was held on Jan. 29, at the house of the institution, Newhall-street, Birmingham.—Mr. Charles F. Beyer, vice-president, in the chair. The secretary (Mr. W. P. Marshall) having read the minutes of the previous meeting, the annual report of the council was then read, which showed the very satisfactory progress of the institution during the past year, and its prosperous condition, with a considerable increase in the number of members, referring also to the large and important special meeting held in London last summer, during the period of the International Exhibition. The annual election of officers then took place, Mr. Robert Napier being elected president of the institution for the ensuing year. Several new members were also elected. The first paper read was a "Description of the apparatus used for sinking piers for iron railway bridges in India," by Mr. Joseph F. Strong, of Alashore. The next paper was "On a type composing and distributing machine," by Mr. Wm. H. Mitchell, of London. The meeting then terminated. In the evening a number of the members and friends dined together, in celebration of the sixteenth anniversary of the institution.

**BRISTOL AND WEST OF ENGLAND WAGON COMPANY.**—The fourth half-yearly meeting of shareholders was held at the Commercial Rooms, Bristol, on Monday, William J. Perry, Chairman of the board of directors, presiding. The report was highly satisfactory, the directors recommending a dividend of 9 per cent., leaving a balance of 3*1/2*. 12s. 6d., to be carried to the next half-year's account. The depreciation fund amounts to 12*1/2*. 13s. 6d., and the whole of the formation expenses have been paid off. The report was adopted, and the dividend as recommended declared, after which the meeting was made special, and the name of the company changed to that of "The Bristol Railway Rolling Stock Company (Limited)," and it was determined to extend the business of the company by authorising the directors to purchase and sell upon redemption terms railway engines, and to purchase and let or sell passenger carriages, and any other railway stock, upon such terms as they shall think proper.

**FATAL ACCIDENT IN THE FOREST OF DEAN.**—An enquiry, which has created great interest among colliery proprietors and miners in the Forest, was brought to a close last week, touching the death of John Carpenter, a collier, employed by Mr. Henry Crawshay at the Lightmoor Colliery, Cinderford. It appeared that on Jan. 15 the deceased and other men were being drawn up the pit in question, having previously given the proper signals, which, however, were not answered from the engine-house. On arriving at the mouth of the pit, and before the men had time to land, the cart began to descend, and the deceased in attempting to jump out fell to the bottom of the shaft, and was killed. It was alleged that there had been an infraction of the rules at the colliery, and that a proper indicator had not been provided. A most searching investigation was, therefore, made into all the circumstances of the case, and the enquiry occupied four days. Mr. Brough, the Government Inspector, at the request of the coroner, was present, and gave his opinion that the colliery was in a most unsatisfactory state, but that there was not a proper indicator, and that there had been a great infraction of the rules. On the last day of the enquiry, after an hour's consultation, the jury returned the following verdict:—"We find the deceased was accidentally killed by falling down Lightmoor Pit on the morning of Jan. 15. We find, also, that the general and special rules have been violated."—No. 12 general rule, in no indicator being provided to show the load in the pit. Special, in rules to bankmen, hangers-on, and others—No. 3, in allowing any other than the hanger-on to make signals; No. 4, by allowing men to ascend the shaft without providing a hanger-on and bankman; No. 6, by men getting out of the carriage before it comes to rest. In rules for enginemen and others—No. 6, in allowing persons to be in the engine-house. We further desire to call the attention of the Inspector of Mines to the violations of the rules, and hereby request the coroner to forward him a copy of this verdict."

**COLLIERY ACCIDENT—THREE MEN KILLED.**—A fatal accident has occurred at Mr. John Robson's colliery, at Heath Charnock, near Chorley. Three men, named George and William Bibby (brothers), and Francis Bateson, were at work at the bottom of the pit, when a mass of stone, weighing about 50 tons, suddenly fell from the roof, and crushed them to death.

**ALUMINATE OF ALKALIES, AND THE MANUFACTURE OF IRON.**—An invention has just been patented by Mr. C. Cochrane, of the Ormesby Ironworks, Middlesborough, which relates to improvements in the manufacture of aluminate of soda and aluminate of potash. Blast furnace slags powdered are mixed with a salt, usually carbonate of soda or potash, and submitted to a high temperature, but below the fusing point. The resulting product is washed, and the aluminate is obtained by evaporation. Mr. Cochrane states that clay and lime, or limestone and chalk, may be used instead of blast furnace slag. The same gentleman also proposes to use the aluminate of potash or soda to improve the quality of iron.

**ECONOMIC ILLUMINATING OIL.**—An improved and economic burning oil has recently been patented in this country for Mr. B. Herbold, of Dorchester, Mass., U.S. The compound consists of four parts of fuel oil, one quart of refined petroleum, paraffin or coal oil, and about one pint of alcohol or methylated spirit. The fuel oil is washed with water, and upon the water being drawn off the petroleum is added, and then the alcohol. The result is that chemical combination takes place, and a good burning fluid is produced.

**THE TRADE IN CRINOLINE.**—It would hardly be believed how important an industry has sprung from the fashion of wearing crinolines, if there were not statistical documents to prove the fact. The steel springs for petticoats amount to 4,500,000 lbs., weight per annum for France alone, 2,400,000 lbs. for England, and 1,200,000 lbs. for the rest of the world. These springs, covered with cotton, are sold at the rate of 1*1/2*. 25c. per lb., which gives an average of 10,500,000 lbs. annually. The cotton employed in covering them is sold at about 3*1/2*. the 200 lbs., which makes the sum 1,200,000 f.

**An American gentleman, Mr. J. L. Linton, has lately visited Paris for the purpose of submitting to the French Government his new method of generating steam. Instead of the ordinary fuel he uses petroleum oil, or, should that be wanting, ordinary coal oil; and, as the machinery which he employs can be easily applied to the steam engines in general use, he claims the merit of effecting a very considerable saving.**

To Directors, Solicitors, Secretaries, &c.

**IMPORTANT TO ALL CONNECTED WITH PUBLIC COMPANIES.**—Now ready, price 2s. 6d., A HANDY BOOK OF WHAT TO DO AND HOW TO DO IT, IN ORDER TO FORM ANY MERCANTILE, MINING, AND OTHER JOINT-STOCK, COMPANIES. Designed as a PRACTICAL GUIDE for Projectors, Promoters, Directors, Shareholders, Creditors, Solicitors, Secretaries, and other officers. By THOMAS TAPPING, Esq., of the Middle Temple, Barrister-at-Law, London: Published at the Mining Journal office, 26, Fleet-street, E.C., and to be had of all booksellers and newsmen.

## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, Feb. 6, 1863.

COPPER.	s. d.		BRASS.	Per lb.
Best selected.....ton	92	0	0	—
Tough cake.....	69	0	—	9 <i>1/2</i> d. —
Title .....	69	0	—	8 <i>1/2</i> d. 9d.
Burra Burra .....	96	0	—	10 <i>1/2</i> d. 11 <i>1/2</i> d.
Copatio .....	"	0	1	0 <i>1/2</i> d. —
IRON.	Per Ton.		FOREIGN STEEL.	Per Ton.
Bars, Welsh, in London..	6	7	6	10 0
Ditto, to arrive .....	6	7	6	10 0
Nail rods .....	7	0	—	18 0
Stafford, in London .....	7	10	0	18 10 0
Bars, ditto .....	7	5	0	8 0
Hoops ditto .....	8	7	6	8 10 0
Sheets, single .....	9	5	0	9 15 0
Fig. No. 1, in Wales ..	3	10	0	4 0
Refined metal, ditto .....	4	0	5	0 0
Bars, common, ditto .....	5	15	0	—
Ditto, merchant, in Tees ..	6	10	0	—
Ditto, railway, in Wales ..	5	12	0	—
Ditto, Swed. in London .....	11	10	0	12 0 12 0
To arrive .....	11	15	0	12 10 0
LEAD.			TIN-PLATES.	*
English Pig .....	21	5	0	23 0
Ditto sheet .....	21	15	0	22 0
Ditto red lead .....	22	15	0	23 0
Ditto white .....	28	10	0	30 0
Ditto patent shot .....	28	0	0	23 10 0
Spanish .....	20	0	0	—
At the works, ls. to ls. 6d. per box less.			In London .....	6 12 6 15 0
			In London .....	20s. less at the works.

**REMARKS.**—The heavy fall in copper, by creating a considerable stir in that metal, has imparted a greater appearance of animation to the market than has been seen for some time past; prices generally are firmer, and in some instances assume an upward tendency; the Metal Market, altogether, has a decidedly less gloomy tone, and it is to be hoped no supervention of dulness will occur again to clog the wheels of our trade.

**COPPER.**—In accordance with our anticipations mentioned in last week's report, smelters of English copper on the 3d inst. announced a decline of 9*1/2*d. per ton, making present price 9*1/2*d. for manufactured (equal to 10*1/2*d. per lb.), and 8*1/2*d. for cake, tile, and ingot. Although a decline in price was pretty generally expected to take place, it was not considered probable that more than 5*1/2*d. per ton would be conceded. So large a drop has caused a great demand, and manufacturers have already nearly filled their books with orders at present prices. Foreign has, of course, been affected by the reduction in English, but not to such an extent. There are strong buyers of Burra Burra at 9*1/2*d., but sellers have faith in the market, and are disinclined to realise at this price. Kapunda held for 9*1/2*d. and upwards.

**YELLOW METAL.**—Simultaneously with copper, the fixed price of yellow metal was reduced 4*1/2*d. per lb.—viz., to 8*1/2*d. The actual selling price has been but very little altered by the decline, for previously sheathing was selling at 8*1/2*d., and brazier sheets at 7*1/2*d. to 8*1/2*d.; and we have not yet heard of any sales having been made below these figures. The discount allowed for cash on shipping orders for sheathing is now reduced to 3 per cent.

**IRON.**—Railway bars remain quiet, at 5*1/2*. 10s. to 5*1/2*. 12s. 6d. in Wales. Merchant bars in fair request, at 5*1/2*. 10s. to 5*1/2*. 15s. at the works, and 6*1/2*. 7s. 6d. delivered f.o.b. in London. Staffordshire descriptions in good demand. Makers of hoops very full of orders; full list prices readily obtainable for first qualities. Swedish bars are not in excessive supply, but the demand being limited prices remain without improvement—11*1/2*. 10s. to 11*1/2*. 15s. for ordinary specifications. Fine sizes realise higher rates. Scotch pigs have scarcely moved during the week; market closes 5*1/2*. 6d., m.n.

**SPELTER.**—Sales continue to be made at 18*1/2*. 5s. cash for spot parcels, and 18*1/2*. 10s. for spring shipment, at which rates there is a tolerably firm market. The stock in London has been reduced nearly 800 tons during the past month, which in itself is a favourable sign. The stock on the 31st ult. amounted to 47*1/2* tons, against 55*1/2* tons on Dec. 31 last year.

**LEAD.**—There has been a considerable demand for WB pigs, which has greatly reduced the stocks, and caused an advance in price of about 10s. per ton; present quotation, 23*1/2*; ordinary soft quality is unaltered; price firm, at 21*1/2*. 5s. Pipe in fair request; sheets and shot dull; Spanish pig, 20*1/2*.

**TIN.**—English remains steady, at fixed rates. In foreign there has been more doing, at about 12*1/2*. cash, and 12*1/2*. three months prompt for fine Straits. In Banca, business is reported in Holland at 7*1/2*. fl., equal to about 12*1/2*. laid down here.

**TIN-PLATES** firm at quotations. Shipments to India and China are rather on the increase. The American demand continues good.

**THE SCOTCH IRON TRADE.**—Since the annual circulars were issued, the stock of pig-iron has increased in Scotland about 35,000 tons, and it is now upwards of 740,000 tons. The shipments, foreign and coastwise, this year were 30,467 tons, against 44,729 tons in the same period of 1862, and thus show a decrease already of 14,262 tons. Though the production continues fairly to overwhelm the demand, and money has recently advanced 2 per cent., the price has as yet only fallen about 6*1/2*d. per ton. Large sales have been made at 5*1/2*s. to 5*1/2*s. 9d. per ton three months open, and 5*1/2*s. 6d. to 5*1/2*s. 9d. per ton cash. The price to-day (Feb. 5) is nominally 5*1/2*s. 3*1/2*d. cash, against 4*1/2*s. 6d. twelve months ago, when the stock was 150,000 tons less, and the prospects of the trade brighter and better than they are at the present time.

**GLASGOW, FEB. 2.**—The almost uniform tone of expectancy that characterised the various trade circulars at the beginning of the year, despite the ponderous figures with which they were charged, tended, in some degree, to impart a little more animation to our market than marked its close in December. And when we consider the varied interests that are involved by an early termination of the American war on the one hand, or prolongation of it on the other, we need not be surprised that every new phase which that contest assumes should be made subservient to whichever interest it is calculated more immediately to affect. To such influences we attribute some of the fluctuations of our market during the past month; and although we close very near to the point at which we opened, it is not because there is less of expectancy now, but by reason of the preponderating influence of dearer money, diminished exports, and ever accumulating stocks. Moreover, we may reckon upon the latter causes of depression continuing so long as prices here are maintained at speculation beyond their legitimate level, whereby other districts not similarly affected are enabled to find not only a sufficient outlet for their produce, but to augment their deliveries in much the same ratio that ours are curtailed by reason of the disparity in price. In confirmation of this we have but to refer to the returns from the Cleveland district, from which we learn that last year their production exceeded that of 1861 by 98,629 tons, and that deliveries by 119,393 tons, whereas here the deliveries fall short of the production by 100,000 tons. The shipments last month are the smallest we have had since 1859, and less than those of the corresponding month of last year by 954 tons. The returns were in January, 1863, foreign, 10,204; consols, 15,654 to 25,858. January, 1862, foreign, 9,787; coastwise, 25,025—4*1/2*, 8*1/2*, January, 1861, foreign, 1

prices were:—Cobre, 22; East del Rey, 1 $\frac{1}{2}$ , 1 $\frac{1}{2}$ ; United Mexican, 5; Fortuna, 4 $\frac{1}{2}$ ; Montes Aureos, 3 $\frac{1}{2}$ , 2 $\frac{1}{2}$ , 3; St. John del Rey, 5 $\frac{1}{2}$ , 5 $\frac{1}{2}$ .

Vigra and Clogau shares closed at 27, 29; East Clogau,  $\frac{1}{2}$  dis. to  $\frac{1}{2}$  pm.; West Clogau,  $\frac{1}{2}$  dis. to  $\frac{1}{2}$  prem.; St. David's,  $\frac{1}{2}$  dis. to par; St. Cuthbert's,  $\frac{1}{2}$  prem.; Nova Scotia, 1 $\frac{1}{2}$ ,  $\frac{1}{2}$  dis.; Cape of Good Hope, 1 $\frac{1}{2}$ , 1 $\frac{1}{2}$  prem.; Ramsey Lead Mining and Smelting Company, 1 $\frac{1}{2}$  prem.; Dolrwydarn,  $\frac{1}{2}$  dis. to  $\frac{1}{2}$  prem.; East Cambrian, par to  $\frac{1}{2}$  prem.; and Don Pedro North del Rey, 4 $\frac{1}{2}$ ,  $\frac{1}{2}$  prem.

**IRISH MINE SHARE MARKET.**—Shares in mines have again been the conspicuous favourites both for investment and speculation, and each of our readers as have regulated their transactions by the opinion we have repeatedly given for their guidance, have further reason for congratulating themselves on the result of their operations. Not only have the shares of the Wicklow Copper Mining Company firmly maintained their gradually increased value, but have this week made a further rise of fully 50s. on last week's closing price of 42 $\frac{1}{2}$  (5 $\frac{1}{2}$  paid), and are now freely taken at 44 $\frac{1}{2}$ . 10s. Connarrees, which were last quoted at 20s. 6d., have improved, and several dealings have taken place in them at 20s. 9d. and 20s. ex new, being the best proof of confidence in the prospects of the mine. This may also be said of Carysfort shares, which were not procurable under last week's price of 18s. 6d., nor those fully paid under 40s. Mining Company of Ireland shares were slightly affected by the greater attention paid to the Wicklow Copper shares, and gradually dropped to 19 $\frac{1}{2}$ , 19 $\frac{1}{2}$ . 6d. (7 $\frac{1}{2}$  paid). General Mining Company for Ireland shares were in fair request and closed at 51. 5s. (4 $\frac{1}{2}$  paid), being an improvement of 5s. on last week. In Carbery, Crookhaven (county Cork), and Castleward (county Down) shares, nothing was done. From the mining districts of the counties of Cork and Clare we have very good accounts. Of Shull Bay Mines, old Cooleen, we hear that, in accordance with the predictions of the captain, but contrary to the expectations of sundry inspectors, two out of the three south lodes, which were discovered in a cross-cut south, on a cross-course, and proved rich, have again been intersected in another cross-cut, 120 fms. west of the cross-course, promising an excellent mine, if worked with proper energy, which, however, seems to be wanting. At Ballycumisk, one of the old Audley Mines (county Cork), it is reported there is now a splendid course of ore in the 114 fm. level, clearly showing how unjustly, as well as injuriously, the county of Cork has been treated by our best geologists, but purely theoretical miners, who asserted that ore found in that district would not hold out in depth. But this is not the only serious error which our scientific men have made on questions affecting the mining interest of our country.

At the Redruth Ticketing, on Thursday, 3869 tons of ore were sold, realising 19,295. 16s. 6d. The particulars of sale were:—Average standard 117 $\frac{1}{2}$ ; average produce, 6 $\frac{1}{2}$ ; average price per ton, 5 $\frac{1}{2}$ ; quantity of fine copper, 255 tons 18 cwts. The following are the particulars:

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Jan. 1.....	3156	£126 2 0	63 $\frac{1}{2}$	£5 12 0	£84 6
" 8.....	2356	127 1 0	63 $\frac{1}{2}$	5 10 0	84 18 0
" 22.....	5926	128 6 0	63 $\frac{1}{2}$	4 9 6	79 11 6
" 29.....	3797	121 5 0	63 $\frac{1}{2}$	4 19 6	78 1 0
Feb. 5.....	3869	117 0 0	63 $\frac{1}{2}$	5 0 0	78 5 0

Compared with last week's sale the decline has been in the standard 31. 5s., and in the price per ton of ore about 4s. 3d. Compared with the corresponding sale of last month the decline has been in the standard 31. 5s., and in the price per ton of ore about 12s.

At the Swansea Ticketing, on Tuesday, 1525 tons of ore were sold, realising 21,202. 11s. 6d. The particulars of the sale were:—Average standard 94 $\frac{1}{2}$  15s.; average produce, 17 1-16; average price per ton, 13 $\frac{1}{2}$  18s.; quantity of fine copper, 260 tons 4 cwts. The following are the particulars of the sales during the past month:

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Jan. 6.....	2220	£104 2 0	13 $\frac{1}{2}$	£11 16 6	£87 14 0
" 20.....	1885	104 13 0	11 7-16.	9 16 0	86 10 0
Feb. 3.....	1525	94 15 0	17 1-16.	13 18 0	81 10 0

Compared with the last sale, the decline has been in the standard 61s., and in the price per ton of ore about 17. Compared with the corresponding sale of last month, the decline has been in the standard 67. 10s., and in the price per ton of ore about 17. 2s. 6d. Of the 1525 tons sold on Tuesday, 268 tons were British ores, which gave an average produce of 11 $\frac{1}{2}$ , and sold at an average standard of 96 $\frac{1}{2}$ . 15s.—87. 17s. per ton of ore; the remaining 1257 tons were foreign ores, which gave an average produce of 18 3-16, and sold at an average standard of 94 $\frac{1}{2}$ . 9s. 6d.—147. 19s. 6d. per ton of ore. On February 17 there will be offered for sale 1944 tons of ore, from Cobre, Oohip, Victor Emanuel, Great Northern, and other mines.

At the Great Wheal Fortune meeting, on Jan. 30, the accounts for the quarter showed a profit of 22582. 0s. 8d. After deducting the Nov. labour cost and the Oct. merchants' bills, the actual balance in favour of the mine amounted to 17941. 14s. 8d. A dividend of 13481. 10s. (16s. per share) was declared, leaving 4461. 4s. 8d. to be carried forward to the credit of the next account. The report of the agents stated that there were 62 pitches being worked by 163 men, at tributes varying from 4s. to 14s. 11 $\frac{1}{2}$ ; the number of men and boys employed upon tuftwork was 102, the total number of hands employed upon the mine being 591. The returns for the ensuing three months would be 110 tons of black tin, about 50 tons of which would be raised from the old mine. The ground removed in the twelve months ending Nov. 1861, was 679 fms. 1 ft. 5 in.; average price, 6s. 3s. 6d. per fm. The tuftwork sampled, 155,704 sacks; average produce, 3 cwt. 3 ft. 9 in.; per 100 sacks. Tin sold, 253 tons 8 cwts. 24 lbs.; dressing cost, 7f. 4s. 6d. per ton. Ground removed in the twelve months ending Nov. 1862, was 1192 fms. 3 ft. 9 in.; average price, 4f. 9s. 6d. per fm. Tuftwork sampled, 247,169 sacks; average produce, 3 cwt. 1 qr. 27 lbs. per 100 sacks. Tin sold, 344 tons 3 cwts. 3 qrs. 7 lbs.; dressing cost, 5f. 10s. 9d. per ton.

At the Craddock Moor Mine meeting, on Jan. 29, the accounts for Sept. and Oct. showed a profit of 641. 13s. 6d. The assets exceeded the liabilities by 12381. 4s. 11d. The agents' report stated that since the last meeting they had completed the sinking of Edmund's engine-shaft to the 110 fm. level, and the men were now employed driving south, to ascertain if there be any part of the Menadue lode in that direction, and to reach Vivian's south lode. They were making good progress in driving the 52 fm. level cross-cut towards the south part of Vivian's lode. The 62 east, upon Gilpin's lode, was worth 1 $\frac{1}{2}$  ton of ore per fm.; they were not yet got under where the lode was so productive at the 42. Since the last meeting the lode in the 42, east from Harris's shaft, had yielded fully 2 tons of rich copper ore per fm., but in the present end it was not so productive, now worth about 1 $\frac{1}{2}$  ton. The lode here had a very promising appearance, and seemed likely to yield large quantities of ore. They had commenced driving the 48 west, where the lode was worth about 1 $\frac{1}{2}$  ton of ore per fm. They proposed selling about 320 tons of copper ore for the next two months.

At Gonamena Mine meeting, on Jan. 29, the accounts made up to the end of October showed a credit balance of 1781. 13s. 2d. A call of 2s. 6d. per share was made. The agent's report stated that he was anxious to see deeper levels, knowing there were good shoots of ore gone down below the bottom level. Gilpin's lode had been crossed at the 90 upwards of 100 fathoms in length, and found in places very productive. Pits had been worked in the back of this level at 4s. 6d. in 1 $\frac{1}{2}$  Taylor's had been a good lode, although not opened to the extent of Gilpin's lode; it would be seen from last report that the 90 west, on Sarah's lode, was within a short distance from where the lode would yield 4 tons of ore per fm. More than 46,000 $\frac{1}{2}$  worth of ore had been sold from this mine, none of which came from below the 90. He believed this would be a good mine when once laid open, and hoped no time would be lost in so doing.

At East Grenville Mine meeting, yesterday (Mr. Brewer in the chair), the accounts showed a debit balance of 725 $\frac{1}{2}$ . A call of 2s. 6d. per share was made. The indications for copper in several parts of the mine are very favourable.

At the Polhigge Moor Mine meeting, on Jan. 28 (Mr. Peter Clymo in chair), the accounts for the four months ending with costs for Oct. showed a debit balance of 775 $\frac{1}{2}$ . 11s. 9 $\frac{1}{2}$ . A call of 3s. 6d. per share was made. The report of the committee stated that from the promising nature of the lodes operated on they could not do better than immediately sink with all speed on the south shaft on the counter lode, and also sink the east shaft under the 12, on the north lode. The report of the agent stated that he thought they might be enabled to raise 100 $\frac{1}{2}$  worth of tin per month towards meeting the current expenses.

At Merlin Mine meeting, on Wednesday, the accounts showed a debit balance of 94 $\frac{1}{2}$ . 17s. 4d. A call of 1s. per share was made.

At Garreg Mine meeting, on Wednesday, the accounts showed a debit balance of 237 $\frac{1}{2}$ . 6s. 5d. A call of 3s. per share was made. The secretary was instructed to dispose of 1000 of the forfeited shares by public auction, and 1000 by private contract, at a not less price than that realised at the auction.

At the Peden-an-drea United Mines meeting, on Monday (Mr. Pulsford in the chair), an account of receipts and payments from Oct. to Jan. showed a balance in hand of 125 $\frac{1}{2}$ . The report of the agents (Capts. W. Tregay, T. Delbridge, and J. Thomas) stated the improved price of tin obtained about the time of the last meeting—continuance of which they had then reason to expect—had since that time entirely disappeared, affecting the value of their sales to the extent of 100% per month. The falling of the piston of their drawing-engine, and the leaky state of the boiler, had materially affected the regularity of their hauling. With their present prospects, they believed they would soon meet the cost with even the current price of tin, for showing even now but a very small loss, while opening the tin ground, they expected to show much better results after the levels were extended a few fathoms, and the skip thrown to the 120—the present bottom level. A continuance of the same quality tin ground now being opened up in the bottom of the mine would ensure great and profitable results, and they had no reason to doubt of its continuance, but had every reason to expect, as they got deeper into the granite, further improvement.—The chairman, having moved the adoption of the report and accounts, stated that, to place their affairs in a sound financial condition, it was considered necessary to make a small call.—The secretary believed that, if they made a call upon the present occasion, it would be the last that Peden-an-drea required.

The accounts having been allowed and passed, a call of 1s. per share was made. A discussion ensued with regard to Sparnon, during which the secretary (Mr. G. H. Cardozo) stated there was no doubt that the East Carn Brea engine took a great deal of the water from Sparnon, but not to such an extent as to enable the property to be developed as it ought to be. An engine, therefore, was necessary. The question would have to be decided whether Sparnon should be worked in conjunction with Peden-an-drea, or separately.

Mr. Hill enquired if some arrangement could not be come to with East Carn Brea? The secretary said that was altogether impracticable. Mr. Jardine thought there could

be no question that Peden-an-drea was looking very much better, seeing that the shares were being bought up by persons residing in the locality of the mine.—Mr. Sharp was sorry to find that the 120 east had fallen off.—The secretary said that was accounted for, presuming that the tin was further north. In answer to a question, with reference to Sparnon, he stated that the condition upon which that sett was granted was that an engine should be erected; but the lord at the time, seeing the energetic manner with which Peden-an-drea was being developed, did not compel the company to carry that stipulation into effect. Since, however, East Carn Brea had turned out so well, the lord required them to carry out that condition. Mr. Jardine remarked that Capt. Thomas Richards spoke of Sparnon in the highest terms; and suggested that a special meeting should be convened for the purpose of discussing the property of working Sparnon, in conjunction with Peden-an-drea, or as a separate sett. It was eventually arranged that a special meeting should be convened for Feb. 23. The proceedings then terminated.

At the Wheal Sidney meeting, on Jan. 28, the report stated that "the quantity of tin which has been sold is nearly 13 tons; the first sale was of 8 $\frac{1}{2}$  tons, at 68. 5s., the second of about 4 $\frac{1}{2}$  tons, at 67. 15s. The balance against the adventurers is about 700 $\frac{1}{2}$ , but considering that our returns will henceforward be more regular, and the cost of coal for the engine will almost cease as the spring advances, and the water-power is again used to command the water in the mine; looking also at the probability of a considerable advance in tin—there being now only about 400 tons on passage from the East against 1300 tons last year, and the price being much higher in England, besides the possibility of an early cessation of the American blockade. We do not think it necessary to recommend a call, and hope at our next general meeting to show more satisfactory results." The mine had been inspected by Capt. Chas. Thomas, who is of opinion that at present with economical management he fears the mine will scarcely pay current expenses with present price of tin. He values the lode as worth 81s., and 13 $\frac{1}{2}$  to 15s., and in one place 24 $\frac{1}{2}$ , and points out a great falling off in the bottom level, but states his opinion that there are indications in both ends offering inducements for vigorous explorations. In effect, Capt. Thomas confirms the reports of the agents.

At Michell Mine meeting, on Wednesday, the accounts showed a debit balance of 41. 6s. 3d. A call of 1s. per share was made.

At Wendron Consols Mine meeting, on Jan. 22, the accounts showed a debit balance of 1153. 1s. 1d. A call of 1s. per share was made. Captains Taylor, Jenkins, and Johns reported that "they consider the mine looking better, and expect during the next quarter to increase the returns of tin. We have 22 pitches, at tributes varying from 4s. to 14s. 4d. in 17. We have sold during the quarter 53 tons 10 cwts. 2 qrs. 17 lbs. of black tin, amounting to 3497. 2s. 1d. We have laid out at Bal-Dees more than 3000 $\frac{1}{2}$ , and do not anticipate any additional outlay there, whilst we rely on considerable returns there and in other parts which have recently improved." Employed on the mine: men, 209; boys, 73; girls, 59—total, 317.

At South Cadron Wheal Hooper meeting, on Tuesday, the accounts showed a debit balance of 275. 10s. 10d. A call of 2s. per share was made.

At East Wheal Lowell meeting, on Monday, the accounts showed a credit balance of 301. 6s. A number of shares being relinquished, it was resolved that they be accepted, and "that the parer be instructed to arrange with the parties on the assumption that the materials and effects are worth 100 $\frac{1}{2}$ ; and that, in case the shareholders who have relinquished should desire a valuation, the parer be instructed to proceed with such valuation in the usual way." Captain J. Burgen reported that—"Since last meeting we have altered the bearing of the shaft by stopping it a little westward, with the sinking 3 $\frac{1}{2}$  fms., have yielded above 400t. worth of returns, and if the lode continues productive as it is at present, I may venture to repeat that our returns will be further increased, and of which I have little or no doubt."

At Hendre-Ddu Slate and Slab Quarry Company meeting, on Monday (Sir William Milman in the chair), the capital account showed an uncalled-up capital amounting to 22,224 $\frac{1}{2}$ . The cash account showed a balance at bankers and in hands of the manager at the quarries of 3396 $\frac{1}{2}$ . The report of the directors and accounts were received and adopted. The retiring directors and auditors were re-elected. Details in another column.

LEEDS, FEB. 5.—During the past week there has not been much business in the Mining Market, but prices have been very firm. Wheal Prudence is progressing rapidly. A sale of 40 tons of ore has just taken place, and the next is expected to be much more.—Edward Brook, Mining Broker, 5, Bank-street.

LEEDS, FEB. 5.—In mining shares there has been more activity manifested during the past week, and previous rates have been maintained.—JOHN GLEDHILL AND CO.

SILVER BANK MINING COMPANY.—A petition for winding-up this company by the Court of Chancery has been presented to the Master of the Rolls, by Mr. P. O'Neal, and Mr. W. J. Edwards, of 47, Mark-lane. The case will be heard on Feb. 14.

RISCA COAL AND IRON COMPANY.—The Master of the Rolls has announced his intention of making a further call, of 100 $\frac{1}{2}$  per share, on the contributors.

MOSLEY GREEN COAL AND COKE COMPANY (LIMITED).—A meeting for proof of debts in this company was held before Mr. Commissioner Goultner, yesterday. Mr. Linklater appeared for the creditors, Messrs. Greville and Tucker as solicitors for the official liquidator, and Mr. Hutton, of Albion-street, accountant, attended to check the proofs. The meeting was adjourned till March 20.

The Court of Chancery has appointed Mr. Frederick Whinney official liquidator of the Rockhall Fishing Company (Limited).

COAL MARKET.—On Monday the fresh arrivals were 45 ships, the quantity for sale, however, was in excess of the demand, and business in house and steam coal was very dull, at a reduction of from 3d. to 6d. per ton. In manufacturers' no alteration. Best house coal, 16s. 6d. to 17s.; seconds, 14s. 6d. to 15s. 6d.; Hartley's, 13s. 6d. to 14s. 6d.; manufacturers', 12s. 6d. to 14s. 6d.—On Wednesday there were 54 arrivals. There was an increased demand for all descriptions of coal, at fully last day's prices.—On Friday there were 73 arrivals. The market was very quiet, and no quoitual alteration in prices. Hetton Wallsend, 17s.; South Hetton Wallsend, 17s.; Lambton Wallsend, 16s.; Tees Wallsend, 16s. 3d.; Eden Main, 15s.; Hasting's Hartley, 15s.; West Hartley, 15s.; Tanfield Moor, 13s. 6d.; Bute's Tanfield Moor, 13s. 6d.:

The directors of this company call the attention of the public to the extracts herewith from letters published by disinterested parties, which, with the reports, they consider conclusive evidence as to the real value of the property they have secured, and feel satisfied that so good an opportunity for legitimate investment seldom occurs. A considerable portion of the capital has been subscribed by gentlemen in the locality of the mine; and should the shares hereafter applied for not be allotted, the deposits will be returned in full. The lease for 31 years and samples of ore can be seen at the offices, 28, Cornhill—entrance in Change-alley.

The reason why this property has not been earlier developed arises from the fact that until the death of the brother of the present owner a lease could not be obtained for mining on the estate.

### SOUTH PARYS COPPER MINING COMPANY (LIMITED), ANGLESEY, NORTH WALES.

Capital, £20,000, in 10,000 shares of £2 each.

£s. to be paid on application, and 15s. on allotment.

It is believed that no further call will be made; but, should such be found advisable, it will not exceed £s. per share, at intervals of not less than three months, or as may be determined by the shareholders at the first general meeting.

Registered under the Companies Act, 1862, by which the liability of each shareholder is limited to the amount of his subscription.

DIRECTORS.

E. COBHAM BREWER, Esq., 14, Bernard-street, Russell-square.

W. R. CRITCHLEY, Esq., Manchester.

JOHN HITCHEN, Esq., Eaton-road, Chester.

JOHN SHUMMIN, Esq., Liverpool.

H. T. SCOTT, Esq., Alexandrian House, S.E.

HENRY GEORGE SMITH, Esq., manufacturer, Birmingham.

SOLICITORS.

G. W. C. Dean, 27, New Broad-street, London; and Messrs. Boydell and Powell, Chester.

BANKERS.—The Bank of London, Threadneedle-street, London; and Messrs. Williams and Co., Chester and Carnarvon.

RESIDENT MANAGER AT THE MINE.—Capt. C. B. Dyer, Parys Lodge, Amlwch, Anglesey, late manager of the Great Parys Mountain Mine.

PROVISIONAL SECRETARY—F. W. HOWES, Esq.

OFFICES—28, CORNHILL, LONDON.

The object of this company is to work a portion of the Great Parys Mountain, shown on the Ordnance Map as Pias Newydd, in the Island of Anglesey, containing 116 acres, adjoining and situated south of the Parys and Mona Mines, which have for many years regulated the price of copper, yielding an average of about 70,000 tons per annum, giving for some years past an average profit of upwards of £20,000 per year.

The directors call attention to the fact that several trial pits have been sunk at the base of the mountain, from which copper ore has been taken, and its value proved from an analysis by Professor Munsatir, which gives them every hope that at no distant period they will cut the main lodes. Should they be met with, in accordance with the unanimous opinion of the three experienced mining engineers who have just visited and reported on the property, there can be no doubt of its proving a first-class investment.

The directors have made arrangements to secure the lease of this valuable property for £500; the same to be paid £250 in cash, and £2000 in paid-up shares of the company.

The directors present, with the prospectus, extracts from some of the articles which have recently appeared in the *Mining Journal*, of Aug. 23 and Sept. 13 and 20, as to the extraordinary wealth of the Island of Anglesey; and, as they more especially refer to the very mountain in which this mine is situated (the boundary only dividing it from the Great Parys and Mona Mines, for which years regulate the price of copper), they desire to call attention to them, and invite the strictest enquiry as to the property, feeling certain that the result will be satisfactory; and the small sum they have to pay for it presents a striking contrast to the amount given for smaller sets in less favoured districts—for all historians who have touched on the mineral deposits in the island concur in the fact that the northern portion of it is very rich, not in copper only, but also lead and iron, and which the wealth derived from the old and the opening of new mines fully proves.

As the success of failure in mining much depends on the person employed to develop the same, the directors have been very careful in the selection of a captain, and have the satisfaction of stating that they have secured the services of Mr. C. B. Dyer, who was many years manager of the Great Parys Mine adjoining, until the termination of the lease, who is consequently thoroughly acquainted with the stratification of the district, and whose testimonials are of the highest character. They pledge themselves that the property shall be worked with energy and economy, which the advantage of having some of the directors residing in the neighbourhood, who will frequently visit the works, will the better enable them to accomplish.

The directors, being anxious to have most correct reports on the property, instructed Capt. Dyer and Trevethan, and Mr. Cottingham, whose reports they publish, to view the property together.

Applications for shares to be made to the bankers or secretary of the company.

The lease and samples of the ore to be seen at the offices of the company, where all other information may be obtained.

REPORTS.

*Mold, Oct. 13, 1862.*—This mineral property is situated on the south-west slope of the Great Parys Mountain, on the right of the turnpike-road, from Bangor via Llanaber-y-medd to Amlwch. It adjoins the celebrated Parys and Mona Mines, and is distant two miles from the town of Amlwch, in this land of Anglesey. It is of considerable extent, and I believe it to be valuable for mineral for reasons following:—1. At a distance of seven miles west and three miles east of Parys Mountain, fine lodes are met with, well defined, and carrying copper to surface, associated with galena and iron pyrites. Similar lodes have also been discovered, and are now being opened, in the Dinorben ground, four miles north-west from Parys Mountain. The whole country is intersected with most powerful and kindly clay cross-courses, and is highly mineralised throughout. 2. A good course of copper ore has been opened and worked about 400 yards west of Parys Mine, and yielded well. This is plainly traceable through the South Parys sett; and coatean or trial pits have been put down in the west end of the sett, from which lode fine stones of copper were taken, and the stonc now lying at surface shows indications for copper. Now, taking into consideration the proximity of South Parys to the Great Parys Mountain Mine, the produce of which rules the copper market for some years, and which is now found strong in depth, (say) 240 yards, I at once recognise the great value of this property. It is, in my opinion, well worth a most vigorous and searching trial all through; and I believe the best course to prove it will be to bring in an open cutting from the lowest possible part of the ground till sufficient cover is attained; thence to carry in an adit, so as to cross-cut the sett through. This trial will not be expensive (say) from £1000 to £1300; but, as I anticipate a discovery by means of it of one or more lodes, on which it will be ultimately necessary to sink and erect powerful machinery, I should recommend a capital of not less than £20,000 to be available, and, with thorough practical skill and energy, there is little doubt the result will be most satisfactory.

THOS. L. COTTINGHAM, M.E.

*Holwell, Oct. 13, 1862.*—Agreeable with your request, I have carefully surveyed this property, in company with Mr. Cottingham and Capt. Dyer, many years agent to the Parys Mine, and who paid the shareholders large profits. I may state that my opinion is that a small outlay would make it a good mine; I cannot for myself see how it can otherwise, as the South Parys and the Parys Mine are close adjoining each other. The Parys Mine boundary comes up to the top of the hill, and it is very clear that they have returned many and many a thousand tons of copper within a short distance of the boundary between you and them. The Parys Mine lodes in many places run (taking all the branches into consideration) the whole of which, being rich for copper, 100 yards wide, from the top of the hill northwards. A few coatean pits have been made, and some lumps of copper ore dug out from them of the same quality as those found in the Parys Mine; but you have not gone deep enough to find the lodes. From the appearance of the hookan cut up by coateaning, traces of copper were visible; and I firmly believe that depth only is required to find you mine that you would never live to see worked out, and that, as I have before stated, for a very small outlay. I would recommend, for the further prosecution of this mine, an adit level being taken up at the southern part of the sett, and continued northwards, so as to be able to cross all the east and west lodes, and on the most promising sink a shaft, which manner could be cheaply carried out, and the whole of the lodes proved. The enormous quantities of copper, for ages past, that have been raised from the Parys and Mona Mines, and being so close to yours, should, in my opinion, be a sufficient inducement to recommend any party inclined to speculate to lay out their money in the South Parys Mine, the advantages for shipping, &c., being very great, the port only a distance of two miles from the mine. On the whole, I can only remark that such chances have been rarely met with, and I believe with little doubt of great success.

JOHN TREVETHAN.

*18, Bucklersbury, London, Dec. 29, 1862.*—I now beg to hand you my report on the South Parys mining sett, in the island of Anglesey. Having at your request been there to inspect the same, I am prepared to say there are three copper lodes (east and west) and one counter lode (north and south), which intersect this property, and which may be proved at a small outlay, and there is little doubt the result will be most satisfactory. I will, if you desire it, send a more full report, with tracings, &c.

CHAS. B. BENNETT, C. and M.E.

*Parys Lodge, Amlech, Oct. 13, 1862.*—This mine is to the south, and adjoins Parys Mine. About the centre of the land a shaft and some pits have been sunk, and some fine stones or lumps of rich ore raised, containing copper, lead, zinc, silver, and a trace of gold. I am of opinion a lode will be found running east and west through the grant. This can be proved by a small outlay by cross-cutting, and also the deposit from whence these large stones or lumps of rich ore came from found in the clay in the lower land. I would recommend this cross-cut (partly open east and partly a level from the low land north towards the Parys Mine southern boundary); and I have no doubt a good lode will be found, and that it will prove a valuable property.

C. B. DYER.

*Aberystwith, South Wales, Oct. 13, 1862.*—I have much pleasure in bearing testimony of the high character and cheering appearance of the South Parys Mine. My opinion of it is most favourable; and I think it very probable that, in a short time, it will become an important property.

S. TREVETHAN, Sen.

*Parys Lodge, Amlech, Jan. 6, 1863.*—In reply to yours of the 23d ult., I beg to inform you that the Mona and Parys Mines have sold from £60,000 to £80,000 tons of ore per annum. The profits of Parys Mine alone, for some years, during the 24 years I had the management, was from £18,000 to £20,000, and one year it exceeded £25,000. I may observe that my connection with the mine ceased when the lease of the company expired, in 1859; it is now being worked by other parties, who employ about 400 hands.

C. B. DYER.

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Messrs. Bolitho, Sons, and Co., Penzance.

SOLICITORS.

H. Grylls Hill, Esq., 17, Barge-yard Chambers, London.

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be led into a new enquiry, and are thus deterred from carrying on the experiments necessary to practically and beneficially develop their new ideas. Perfected inventions also of great value, which, if publicly made known, would give employment to a great number of hands, are notoriously kept secret, and withheld from public use, owing to the expense of taking out patents; such inventions are all doubly lost, since, if known to the public, they would become the subject of researches which might lead to other very important and beneficial results. It appears that after defraying all expenses from Oct., 1852, to Dec., 1861, there remained a balance of 269,837<sup>l</sup>, of which sum, however, 138,815<sup>l</sup> was paid as revenue into the governmental taxation account, leaving still unappropriated a surplus of 131,022<sup>l</sup>. But why a sum of 138,815<sup>l</sup>, levied from inventors in the obtaining of their patents for new inventions, should have been paid into the governmental taxation account would seem to require explanation, there being no principle of equity, or even of sound public policy, on which so objectionable a tax can be defended. Whilst the annual receipts from inventors now exceed 100,000<sup>l</sup>, the actual expenses of the Government Patent Office fall below 47,000<sup>l</sup> per annum, whence it is obvious that a great reduction in the cost of patents can be made without injury, even to existing interests. The committee remarks, that "practical and scientific men, conversant with the state of manufactures abroad, are generally agreed that it is only by dint of great exertion, under the most favorable circumstances, that the supremacy of this country in the manufacturing and chemical arts can be maintained. The comparative cheapness of food abroad, the lightness of taxation, and the liberal encouragement afforded to science and its cultivators by foreign Governments, all materially contribute to counterbalance the natural advantages we possess, but the chief causes which check invention in this country, impede the progress of the industrial arts, and give the vantage to our foreign competitors, are the high cost of obtaining patents for inventions, and the very doubtful protection which our laws extend to them when obtained, and we would urge upon our Government the paramount necessity which now exists for a greater and more liberal encouragement to invention than has hitherto been practised."

They consider that from the experience obtained by the operation of the new Patent Law during the last 10 years, it is manifest that the present charges for patents are very much too high, and consider that the total expense attending the obtaining Letters Patent should not exceed 25<sup>l</sup>. That this sum should be divided into five sums, of 50<sup>s</sup> each, and a sum of 12<sup>l</sup>. 10s.—the five sums of 50<sup>s</sup> to be payable in lieu of the present five 5<sup>l</sup>. payments, and the sum of 12<sup>l</sup>. 10s. to be payable at the end of the fifth year, or in such other manner as the Commissioners of Patents may deem advisable; but the committee recommend that the first payment should be made as small as possible. They propose that as soon as the time at which the sums should be paid, and the final specification deposited, has arrived, the patentee, if he has not complied with either of these formalities, shall, within 24 hours, be served by one of the clerks of the Patent Office with a notice in writing, or forwarded through the Post Office at the address mentioned by the patentee in his petition or declaration, stating that the time for the accomplishment of the formality in question has elapsed, and that, if within 28 days from the date of the said notice in writing, he has omitted or otherwise failed to comply with the formality in question, his application shall be null and void, or his patent, if he has one, cancelled; whereupon, if within the 28 days the patentee, or any person acting for him, fulfil the stipulations of the Act, and pay to the said clerk an extra fee of 20<sup>s</sup>., it shall be lawful for the clerk of patents to comply with and fulfil the formalities as if the application had been made at the proper time.

Legal procedure generally as regards patent right, and particularly as regards infringements of patents—the question of scientific evidence, and the desirability of establishing a patent law tribunal, or court, for the trial of patent causes, is still under consideration, but the committee is already in a position to propose that in clause 35 of the Patent Law Amendment Act of 1852, after the words "the assignment of any letters patent, or of any share or interest therein, any license under letters patent," the following words be inserted, "provided the instrument bears under the signature of the patentee the words to be duly registered." That the following words be added at the end of clause 35 of the Patent Law Amendment Act, 1852, "provided always, that the parties to any assignment or license shall be estopped from impeaching or impugning the validity of such patent so assigned or licensed." And that when any objection to the validity of any patent which is, or has been, before a court of law can be removed by the entry of a disclaimer or memorandum of alteration, such court may order the entry of a disclaimer or memorandum of alteration.

We have abstracted the report at this length from the interest naturally attaching to the subject, and from the influence which any document emanating from an institute presided over by so competent a council must necessarily possess. In conclusion, we may refer to a correspondent's communication, in another column, which disagrees with the report upon many important points; we thus enable our readers to judge for themselves.

**PATENT LAW COMMISSION.**—On Tuesday and Wednesday last the sittings of the Commission for enquiring into the working of the Patent Law were resumed. The Commissioners present were Lord Stanley, Lord Overstone, Sir W. Erle, Sir W. Page Wood, H. Waddington, Esq., W. R. Grove, Esq., and the secretary, Edward Lloyd, Esq. It is proposed to hold weekly meetings of the Commission during the present session.

**MANUFACTURE OF HEMP AND WIRE-ROPE.**—A very interesting paper on this subject was read before the Institution of Mechanical Engineers, by Mr. Charles Shelley, of London, in which he carefully traced the entire process of manufacture, from the heckling of the hemp to the finishing of the rope. Mr. Shelley tells us that the strength of hemp-rope varies considerably, and depends principally upon the quality of hemp from which it is made, the number of yarns composing the stands, and the manner in which the ropes are laid. The average strength of each yard in hawser-laid ropes is found to be greatest with the smaller sizes of ropes. Shroud-laid rope, made with four strands, is about one-fifth weaker than hawser-laid rope, with three strands, on account of the additional twist, or "hard," which is given to the shroud-laid; and cable-laid rope is about one-third weaker than hawser-laid rope. The history of wire-rope making is given—especially its introduction, 39 years ago, for the supporting cables of a suspension-bridge at Geneva, to the present time, the very excellent machine of Mr. Archibald Smith being, of course, referred to as the most perfect yet devised. In the discussion which followed the reading of the paper Mr. P. Haggie stated that a wire-rope 1 1/10th inch in diameter was about equal in strength to a hemp-rope 2 1/2 inches in diameter; the weight of hemp rope was about 1 1/2 times that of wire-rope of the same total strength. A hemp-rope 3 1/2 inches girth would not bear more than 3 1/2 or 4 tons; but in comparing hemp and wire-ropes of the same strength, he believed that if the same attention were bestowed upon a hemp-rope as upon a wire-rope, the hemp-rope would be found more economic in durability as well as in first cost (when used for pit purposes), provided the depth of the pit was not extreme. Beyond a certain limit, indeed, a hemp-rope used for winding in a pit would kill itself—that is, the great weight of the rope itself hanging down the pit, and the consequent continued stretching every time it was lowered, would eventually cause it to become almost rotten, and it would then give way.

**UTILISATION OF THE REFUSE OF SLATE WORKS.**—Mr. R. Hicks, of Kensington-park-terrace, has patented some improvements in the manufacture or preparation of paints or pigments and colours. The invention has for its object the useful employment of the debris or débris obtained in slate quarries or slate works, in combination with anyone of the known carbons or charcoals, such as lamp black, ivory black, and such like matters, or of any of the substances containing sufficient carbon. These ingredients, or schistose substances, with the addition sometimes of oxide of iron or hematite iron, are intimately mixed together and subjected to the action of heat, whereby their chemical constitution becomes modified, so that, when subsequently pulverised, they may be advantageously employed as paint, pigment, or colour. When using slate which contains from 10 to 15 per cent. of oxide of iron or hematite iron or oxide of iron may be added; but when using slate or any of the various clays or schists that do not contain sufficient oxide of iron in themselves, the slate, clay-slate, schist, or schistose substances are mixed in a pulverised state with the carbonaceous materials, and 5 to 10 per cent. of pulverised hematite, or other iron ore, is added thereto; the quantity of oxide of iron to be added to the slate or schistose substances employed varying, of course, with the ferruginous quality of the schistose substances. The whole of the ingredients are intimately incorporated together, and then submitted to the action of heat, in the manner hereafter described. In carrying out this invention, when using slate, the slate is reduced to a fine powder, and mixed with the carbonaceous matters, and with the proper percentage of iron ore when required, and also reduced to a fine powder. These ingredients, when thoroughly incorporated, are put into a covered retort or crucible, from which the atmosphere is excluded, leaving, however, a small aperture in the upper part of the retort or crucible for the escape of the vapours or gases that may be given off. The time required to heat the mixture must depend upon the quantity operated upon, the size of the retort, and the energy of the fire. The object to be obtained is to cause the carbon to act upon, and partially decompose, the oxide of iron, and thereby reduce the ingredients to a black mass. When the retort or crucible is removed from the fire, and the contents

have become cold, the cover may be removed, and the calcined mixture may be pulverised, and black paint will be thereby produced. It should be observed that the colour of the mixture would be injured if it were removed from the retort or crucible while hot. The process above explained is that adopted or employed for making black paint. When manufacturing lighter colours the slate, clay-slate, schist, or schistose substances, reduced to powder, are put into an open crucible, which is placed in a furnace and kept therein until the carbon contained in these substances is burned away, and the iron therein is peroxidised. The colour produced is a fawn or salmon colour, which may be varied in shade by an admixture of different colouring materials, such as ochres of different colours, hematite iron, and other suitable substances. For some purposes the slate is pulverised, and, after being reduced to an impalpable powder, is mixed with oil and water. This mixture makes a grey paint, or a delicate grey colour. In other instances, the pulverised slate is mixed with different coloured ochres or other matters suitable for producing a variety of tints; oil or water being afterwards used, as before mentioned, in manufacturing the paints or colours. The black powder produced by the process already described may be employed as the body colour used in the manufacture of black lead, for which purpose it is mixed with plumbago. The patentee claims, "the mode or modes herein set forth of preparing slate, clay-slate, schist, or schistose substances, for the manufacture of paints, pigments, or colours."

**UTILISATION OF FURNACE SLAG.**—Mr. A. Warner, of Threadneedle-street, has patented some improvements in the manufacture of pigments or paints from certain refuse materials. The invention has for its object the application of the refuse or slag obtained from puddling and reheating other furnaces employed in the manufacture of malleable iron to the manufacture of pigments or paints. For this purpose the refuse or slag is reduced to a fine powder by any of the well-known mechanical operations for grinding or pulverising similar materials or other hard substances. The ground or pulverised materials are then to be washed or otherwise treated, and combined with oil or other materials, and used as pigments or paints for various purposes, as is well understood in the manufacture of pigments or paints from other oxides of iron or other metals. In carrying out this invention the slag or cinder should be reduced to a fine or impalpable powder in a grinding apparatus, such as is employed for grinding flints for pottery purposes, the materials being ground in water. After being sufficiently ground the materials are run off into a tank and allowed to subside, and then the water is run off from the surface, and the wet slimy mass is spread upon heated fines, or the material may be dried by any other convenient means. The pigment or substance thus prepared must then be taken and made up into paint by mixing with water and oil, and may be used in combination with colours and with dryers, according to the purpose for which it is required.

#### FOREIGN MINING AND METALLURGY.

Affairs do not present many features of importance in Belgium, except for rails. To the contracts mentioned recently as having been concluded during the last few weeks must be added one obtained by the Cockerill Company for 2500 tons of rails of homogeneous iron, required for the Northern of Spain Railway; and another, of 7000 tons of rails and accessories, to be furnished by MM. de Dorlodot Frères, for a line from Braine-le-Comte to Gand. In the Liège basin, ordinary pig is now worth 21. 14s. to 21. 16s. per ton, but that obtained from a mixture containing scorie is done at a trifles lower, say 21. 12s. per ton. At Charleroi, the various qualities of pig have been quoted of late as follows:—Inferior, 21. 16s.; mixed, 21. 14s.; strong and hard, 21. 2s.; speckled, 21. 4s. to 21. 18s. per ton; grey and superior, 21. 12s. per ton. The quotation for rails averages 21. 16s. to 21. 18s. per ton at the works. Sheets are dealt in at 21. 8s. to 21. 16s. per ton for No. 15 of the English standard, but as regards the export of large lots, the quotation has fallen to 21. 8s. per ton. As has been stated recently, all the Belgian metallurgical works now manufacture girders, and contracts have been concluded at prices ranging from 21. 16s. to 21. 18s. per ton. Fine plates are easily "placed" being forwarded into France and Switzerland. A new rolling-works has just been put into activity at Marchienne. For some time past Belgian metallurgical establishments have been considerably extending the radius in which they seek their minerals. To the minerals of the district between the Sambre and Meuse and to the oligistites of the Mense, the minettes of Luxembourg and the hydrated minerals of Poix, in the Ardennes, have been successively added, as have also been the scorie of forges, the refuse of rolling-works, &c. From the competition thus provoked a fall of prices has necessarily arisen, and the various descriptions of minerals are now offered at very cheap rates, although it is probable that the reduction in quotations has not yet attained its full development. A general meeting of the shareholders in the Corphalte Company has just been held, to consider the ratification of an amalgamation proposed to be entered into with an Austrian Company, possessing rich bearings of coal, minerals, and zinc-works. It was agreed, with three dissentients, that the amalgamation should take place, that the combined undertakings should assume the name of the Austro-Belgian Metallurgical Company, that the duration of the company should be extended over a further term of years, and that additional floating capital should be raised for the purpose of developing and extending the operations of the concern at its two centres of production.

In France, the works of the basin of the Nord are selling rolled mixed irons of the first class at 21. 16s., with a variation of 21. 8s. per class; sheets of the first-class at 21. 14s., with a majoration of 21. 12s. among the succeeding classes; puddled plates, 21. 16s.; ditto hard iron, 21. 16s.; ditto wood-produced, 21. 12s. per ton. Refined pig has been quoted 41. 2s. to 41. 4s. per ton. In the Moselle district, prices are slightly below those just indicated. Pure refined wood-produced pig has been dealt in at St. Diéz at 21. 12s. per ton. Quotations for mixed pig have a large margin, according to the composition of the mixture of the combustibles. This mixture varies considerably, the proportion of coke used in the fabrication ranging from 25 to 75 per cent. The present price runs from 41. 8s. to 51. Several rolling works are making reductions of prices, in order to obtain contracts; but the tariff current for iron may be said to average 21. 4s. to 21. 12s. for first-class, with a scale of 4s., 6s., and 8s., between the classes. The forces of the Lyons district quote first-class iron at 9. 4s., with a scale of 8s. between the classes; hoop iron, 10. 16s., first category; 11. 12s., second category; 12. 16s., third category, and 13. 12s., fourth category. Important works undertaken of late years, in order to facilitate the transport of the raw materials required for metallurgical industry, have not failed to attract the special solicitude of the French Government, and last year did not yield less satisfactory results under this head than 1851. Thus, in the northern district of France, not only—was stated last week—has the Courrières Coal Mining Company obtained a concession for a navigable canal intended to bring the products of its mines to the canal of the Haute Deûle, but the three coal companies of the Lys Supérieure, Vicoigne and Nœux, and Lens, have been authorised to construct three branches to put their pits of extraction in direct communication with neighbouring railways and canals. Two railways conceded to the Northern of France Railway Company by decree dated July 6, 1853—one from Lille to Tourmial, and the other from Valenciennes to the St. Quentin and Erquelinnes—will also be useful in similar kindred respects. The line from Arras to Hazebrouck, via Béthune, which is of first-class importance as regards the collieries of the Pas-de-Calais, is now in full activity; and the mines of this department, under the influence of the new outlets which have been for some years opened to them, have seen their extraction, which scarcely amounted to 4,000,000 tons in 1857, increased to 8,000,000 tons in 1852. As regards the coal basin of the Gard, its products must, without doubt, find a demand principally on the shores of the Mediterranean; but it was not without importance as regards the future development of its working, that the basin should also be able to run off its supplies towards the departments of the centre of France. In this respect the concession of a railway from Brioude to Alais, which has been definitely made to the great Paris, Lyons, and Mediterranean Railway Company—the most imposing enterprise of the kind in the world—will fill up the only remaining gap of importance which arrests the tendency of the basin of the Gard to extend its connection. The new line will also, at the same time, facilitate the running off in the direction of the south of the coal of the Bruscas basin, the development of which will be promoted. As regards the central district of France, a decree, dated Oct. 22, 1862, authorised the execution of a branch railway to unite the coal basin of St. Eloy to the Moulins and Montluçon line. In the present state of affairs this basin has only ordinary roads by which to deliver its products, but as soon as it has the benefit of railway communication it will, without doubt, attain an important position in connection with the consumption of the empire. The Aubin basin, which has hitherto only been enabled to forward its products by the St. Christophe and Montauban Railway, has, by the opening of the line from Brives to the Lot, been placed in communication with the departments of the southwest; and coal from this rich basin will henceforth be in a position to compete advantageously with that delivered from England. Finally, the Grasse-Succa coal basin, under the influence of the railway uniting it to Béziers, and, by consequence, to Céte and the coast line of the Mediterranean, has seen its total extraction expand in a notable manner; thus, in 1860, this extraction did not exceed 69,400 tons, while in 1861 it attained a total of 103,000 tons, and in 1862 of 117,100 tons. It may, then, be affirmed without hesitation that the measures adopted by the Government to facilitate on all points the movement of mineral combustibles have already realised important results. Thus, notwithstanding the deplorable events in America, and the inevitable reaction which they have involved in Europe, the coal production of France has not ceased to increase; in 1859 it did not reach 7,600,000 tons, but in 1860 it rose to 8,639,168 tons, in 1861 to 8,400,000 tons, and last year it appears to have reached an aggregate of 9,400,000 tons. We gave some details with respect to the production of iron in France last year in a recent number of the *Mining Journal*; but it may be desirable to extend the analysis a little further. In 1862 the total quantity of pig produced in France was 1,053,000 tons, while in 1859, the year preceding the introduction of the Treaty of Commerce, it was only 856,152 tons. Notwithstanding, too, the increase of about one-fourth which here appears, France imported from England last year rough pig to the extent of 160,000 tons; in 1859 it did not reach 7,600,000 tons, but in 1860 it rose to 8,639,168 tons, in 1861 to 8,400,000 tons, and last year it appears to have reached an aggregate of 9,400,000 tons. We gave some details with respect to the production of iron in France last year in a recent number of the *Mining Journal*; but it may be desirable to extend the analysis a little further. In 1862 the total quantity of pig produced in France was 1,053,000 tons, while in 1859, the year preceding the introduction of the Treaty of Commerce, it was only 856,152 tons. 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year showed an increase as compared with the corresponding half of the preceding year of 1827, while the expenses had only increased 459.; leaving a net increase of 13681. After the payment of interest on debentures, and the rent of the Vale of Towy Railway, there remained 49577. applicable, to a 5 per cent. dividend on the preference stock, and to a 5 per cent. dividend on the B preference shares, amounting to 18517., and for the ordinary stock 31161., out of which the directors recommended a dividend at the rate of 11. 7s. 6d. per cent. for the half-year; making, with the 12s. 6d. declared in July last, 2 per cent. for the whole year on the ordinary stock, and leaving a balance of 4077. for the next account. The traffic receipts showed a steady and progressive increase, and when the through route with the North will be opened, it is expected that a large increase of traffic will be the result. The capital account showed a balance of 11041. against the company. The report was adopted, and the dividends recommended will be payable in March. The retiring directors and auditor were also re-elected. On Thursday the standing orders were decided to have been compiled with in the cases of the Bristol Railways Junction Railways, at an estimated cost of 360,000/., and the Vale of Neath for new lines at Merthyr and Aberdare, to amalgamate with Swansea and Neath, and to raise 180,000/. The proposed Cardiff, Caerphilly, and Abergavenny was among the cases of non-compliance with the standing orders, and also the Brecon and Merthyr Tydfil Junction new lines. The standing orders were also declared to have been complied with in the following cases:—Penarth Harbour, Dock, and Railway, for leasing the line to the Taff Vale Railway; Abergavenny and Welsh Coast for further lines in the district, and to raise 240,000/.; Mid-Wales to raise a further sum of 200,000/., to carry out new works; and the Whitchawd and Milford Haven for a line from the South Wales at Whitland to Begelly and Pembroke and to raise 240,000/., capital.

The recently promoted "Bank of Wales" is looked upon with peculiar favour throughout South Wales, and it is reported that Messrs. Bailey and Co., bankers, of Newport, Monmouth, and Abergavenny, are prepared to transfer their business to the new company, on certain conditions. Competition is what is wanted in the district, however, and there is no doubt but that the new bank will receive a fair share of business, independent of any amalgamations which may be brought about.

The report of the Risca Widows and Orphans Fund Committee has been issued, and it appears that the total subscriptions received by Mr. S. Vernon, the treasurer, amounted to 64461. 3s. 7d. The number on the fund on Jan. 1, 1861, was 51 widows, 107 children, and 13 aged parents, and the weekly allowances amounted to 22s. 6s. 6d. Since that time the allowance to four of the widows has been discontinued for misconduct, and several others, who were desirous of marrying, received sums varying from 10/- to 30/- each, on giving a full receipt for all claims against the fund. The only incidental expenses incurred had been the advertisements, postages, and receipt stamps; all other expenses having been borne by the Risca Company. The number on the fund had been reduced on Jan. 1 last to 55 widows, 71 children, and 11 aged parents, and the weekly payments to 14s. 3s. 6d. The balance of the fund in hand, at the same date, amounted to 4341. 1s. 4d.; which, it is believed, will be ample sufficient to meet all claims that may be made upon it.

The arrivals at Swanses include—The Alliance, from Seville, with 60 tons of copper ore for Richardson and Co.; Dartmouth, from Seville, with 102 tons of copper ore for Richardson and Co.; Curraghmore, from Almeria, with 220 tons of copper ore for Williams, Foster, and Co.; Madeline, from Caldera, with 218 tons of copper regulus, and 307 tons of silver ore, value 15,390/., for Henry Bath and Son; Stranger, from Guayaquil, with 345 tons of unwrought copper, for Henry Bath and Son; Sarah Burney, from Caldera, with 230 tons of copper regulus, and 185 tons of copper ore, for H. Bath and Son.

**BREACH OF COLLIERY RULES.**—At the Merthyr Police Court, on Wednesday, Jan. 28, before Mr. J. C. Fowler, stipendiary magistrate, William Abraham, collier, was charged by Mr. John Moody, viewer of the Cyfartha Collieries, with smoking tobacco in a stall on the 4-foot vein, in No. 2 Cethin Pit, contrary to the 56th special rule of the said pit, on Friday, Jan. 23. John Eynon, the overman of the pit, said that he went into the pit on the day in question, and smelt smoke; he went up to the place where defendant was working, and found a tobacco-pipe under a stone in the gob; he charged defendant with smoking, but the latter denied it then, though he admitted it on the following day. Mr. Moody, the viewer, said he was sorry to press the charge against the defendant, as he had never found him wrong in anything before; but he had no alternative. Mr. Fowler repeated his usual admonitory observations in similar cases, and stated that since he found a small amount of imprisonment was not sufficiently effective in stopping this foolish and terribly dangerous habit, he would increase the term of imprisonment until he reached the highest penalty authorized by law. Defendant would be imprisoned and kept to hard labour for a term of six weeks.

**BOILER EXPLOSION AT THE ABERAMAN IRONWORKS.**—On Monday last, about 3 p.m., a serious boiler explosion occurred at the above works, belonging to Mr. Crawshay Bailey, M.P. Fortunately no loss of life occurred, but from the force of the explosion the seatings of the boiler which exploded, and another adjoining it were completely demolished, and part of the roof over the engine-house carried away. The boiler which exploded is about 30 feet long by 7 feet diameter, with a 2-foot tube inside, was thrown back bodily off its seating about 30 feet, and cut in two in the centre, as with a knife, the one half of the boiler, not less than 6 or 7 tons, was blown to a distance of not less than 50 yards, and spread out on the ground like a piece of paper. It is stated that the boiler was a very old one, and had undergone a great deal of wear and tear. It is very fortunate indeed that the force of the explosion was in the opposite direction to the works, as had it occurred at the other end of the boiler several lives undoubtedly would have been sacrificed, and also great damage done to the Aberaman mill and forge.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

**FEB. 5.**—On the whole, the demand for manufactured Iron shows some signs of improvement, though the trade cannot be described as brisk. Several houses, which were running short of orders, are now able to make full time in nearly all departments, and there is a general feeling of confidence that as soon as the money market gets a little more settled a moderately good demand for iron will be experienced. The dealers in Pig-Iron find the market a shade flatter; in fact, the advance they got at the commencement of the quarter was fully as much as the state of the trade warranted, and if they are compelled to sell now they find buyers rather shy. The demand for coals is not quite so active, but it is still good. The Cannock Chase district is being steadily developed; branch lines are being constructed to run into the railways which cross it, and, of the railway bills before Parliament, one for the extension of the Cannock mineral railway from Rugeley to the Churnet Valley, near Uttoxeter, so as to give a direct route from the Froghall limestone mines; and another for the extension of the Birmingham and Sutton coal field line to Lichfield, are intimately connected with the development of the minerals which abound in the extensive plateaux which forms the central water-shed of Staffordshire and Warwickshire.

An accident, sad in its results—causing the loss of three lives—and terrible on account of the cause, occurred at Bradley, near Bilston, on Friday morning last, at the Pagett's Croft Colliery, of Mr. A. Wright. Three men, named Howell, Davis, and Kempson, descended the shaft in the trolley-skip, when the rope parted, and they were precipitated to the bottom, and killed. At the inquest, on Tuesday, it was clearly proved that the rope had been cut by a sharp instrument at the place where it gave way. This was at a splice, and two of the strands had been cut through, the third having broken; and the maker of the rope said that it had been cut by a person who had evidently calculated how much to cut it so as to bear the skip, which was first sent down, and again raised, as a test of safety, but to give way when the skip was loaded with persons. Suspicion attaches to a man who did not as usual go down with the first band of men, and who afterwards made a remark that he would not because the rope was bad. The examination was adjourned. It is worthy of consideration whether it would not be well in the preliminary lowering and raising of the skip to weight it beyond the weight of the men who are afterwards to descend.

Meetings of public companies are now being held. The Wolverhampton New Waterworks Company, which having to pay a dividend to the old company, has not yet been a flourishing concern, made a net profit last year of 12,626/., and a dividend of 1 per cent. on the ordinary shares was declared.—The directors of the Wolverhampton and Staffordshire Bank report net profits for the year 1862 of 10,932/., and after paying a dividend at the rate of 5 per cent. per annum, a balance of 5932/., remained to be transferred to the capital account, which is now 92,091/., its nominal amount being 100,000/. The realisation of the estates of parties who failed in 1857–8 was going on favourably, and 16,431/., had been received during the year on that account, leaving the amount unrealised for 94,052/.. The Chairman (Mr. T. E. Shaw) expressed great confidence in the future prosperity of the bank.

The Birmingham Joint-Stock Bank (Limited), which commenced business in Jan. 1862, shows a net balance of profits of 72,271/., and after paying 962/., as preliminary expenses, 350/., is carried to the guarantee fund, and 408/., to next half-year. The premium on the second issue of shares, and the amount now transferred from profits, raised the guarantee fund to upwards of 20,000/.. The Bilston District Banking Company, carrying on business at Wolverhampton, have declared dividends and bonuses at the rate of 15 per cent. for one year, and add 130/., to the guarantee fund, raising it to 25,000/.. The Dudley and West Bromwich Banking Company, after declaring dividends at the rate of 5 per cent., appropriate 6200/., towards meeting losses in 1857–8, and in 1854–5. On the whole, the trade of South Staffordshire is much sounder than for some years past.

The suspension of Messrs. G. W. Reynolds and Co., manufacturers of steel for crinoline and steel toys, was announced on Wednesday. The liabilities are put down at about 30,000/., and the firm say "the deficiency (if any) will be inconsiderable."

Mr. F. D. Longo, Assistant-Commissioner under the Children's Employment Commission, is pursuing his enquiries on this subject in South Staffordshire.

#### REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

**FEB. 5.**—The reports which have been current during the whole of the week from different parts of these counties represent the trade as in an improving condition, but the late rise in the Bank rate of discount has affected, to a certain extent, the orders for speculation. Without regard to the depression which exists in the manufacturing districts, we have a very steady demand for all descriptions of iron, but more particularly for plates and rails. The renewals which are taking place on our main lines are now more frequent than formerly, and the result is that we should have for some time a healthy trade in all descriptions of iron-work. The building trades are generally dull, and there has been latterly a falling off in the demand for stove grates and other iron-work used in the erection of various buildings. The most remarkable event connected with the manufacture of iron of modern times is the facility which many large firms have now for the manufacture of monster pieces of wrought-iron. The huge armour plates now used for our vessels of war are made with wonderful rapidity,

considering the immense weight of iron brought under the control of machinery and manual labour. We were recently much interested in the inspection of a large beam pumping-engine, which has been manufactured by the Butterley Iron Company, Derbyshire, and is now in course of erection at the Clay Cross Company's works. It is calculated to work about 300-horse power, and will, with the aid of the equally extensive pumping machinery attached, drain a large tract of mineral ground. This gigantic piece of machinery is rapidly approaching completion, and it is anticipated that in a few weeks it will be at work.

The Coal Trade is in an healthy position throughout the whole district, and had it not been for the cotton famine we should have had an unprecedented brisk season. The stocks in the hands of merchants, however, had been kept so low that even with the return of the winter season a sufficient impulse has been given to keep the trade in a state of activity. Unfortunately, in several districts of Lancashire an attempt is being made to obtain an advance in prices, but we believe that in all other districts the men are, on the whole, contented with current rates. London and the southern markets have drawn largely this season from the Yorkshire and Derbyshire coal fields. The directors of the Midland Railway, on Tuesday, gave a pledge that they would make a new line to intersect the large coal field lying in the Dronfield district, which will afford an outlet for a wide mineral district. Fresh evidences are also being afforded of a desire to develop the mineral wealth of the Derbyshire Peak, which will be brought fully out when the new line from Rowsley to Buxton is opened.

The desirability of a thorough supervision over all ironstone mines is becoming daily more and more apparent. The frequency of accidents from the want of a proper enforcement of discipline is too evident, by the numerous fatalities which are recorded, and it would be a great boon if some steps were taken in the present Parliament to have ironstone mines included under the same system of inspection which prevails in collieries.

The depression in the cotton industry, and its concomitant train of evils, has seriously checked speculation in lead mines, so that for many months past there has not been that active spirit of enterprise manifested which would otherwise have been shown. Another prejudicial influence has been the failure of some other existing speculations. The stoppage of the North Derbyshire Mine, in which so many persons were interested, has thrown a damp on mining speculators, but with more care we are of opinion that the mine would do well. The Mill Dam is to be sunk several fathoms deeper, and a large Cornish engine erected.

The local share market has been dull, and we have not seen our mining stock quoted at such low figures for some time past.

#### THE TIN TRADE.

A very large business has been done during the past month, resulting in a rise in Straits and Banca of 3/- per ton. The noticeable feature still is the continued demand for China and Japan; shipments of Banca have actually been made from London to that market, and, on dit, that some large recent purchases of both Banca and Straits are also for that destination. Noshiments are being made from Singapore to Europe, the demand continuing for China, at prices equal to 1511. 10s. cost and freight to London. From Penang we have advice of a shipment, but the purchase was made some time back, and freight engaged; our advice induces us to believe that we shall have but a small supply for some time. Our stock here again shows an increase, but the quantity on passage is much smaller than last year, and there is every prospect of the Dutch sale of Banca being small. Consumption in this country continues decided, slack, and very little foreign is being used as compared with English tin, as the latter is comparatively much cheaper.

The English smelters have been well stocked, seems uncontested, and the immediate future of our market very much depends on whether they advance their official prices or not.

Looking further forward, the short supply of foreign tin will have its effect; and it is a fact to be borne in mind that in 1857, when the China demand was excessive, prices advanced to 150/- per ton.

The quantity of the here and in Holland on Jan. 31, was as follows, compared with the three preceding years:—

	1863.	1862.	1861.	
Slabs. Tons.	Slabs. Tons.	Slabs. Tons.	Slabs. Tons.	
Stock in Holland .....	60,405 = 1880 .....	48,806 = 1520 .....	61,291 = 1860 .....	51,368 = 1590
Arrived towards next sale .....	75,170 = 2340 .....	81,620 = 2520 .....	102,361 = 3150 .....	82,906 = 2570
Stock here .....	2513	1500	405	800
Total tons.....	6723	5540	5413	4950

The quantity of Straits now abroad for Great Britain is 264 tons, against 1365 tons last year, and 768 tons in 1861, and to the continent of Europe 60 tons, against 190 tons last year.

**STRATS.**—The sales during the past month exceeded 20,000 slabs, at prices ranging from 116s. 10s. to 120s. cash, and 117s. to 121s. three months, for fine square bottom strats; round bottom, and nothing very fine, not saleable within 17. or 27. per ton. The market closes very firm.

**BANCA.**—The sales amount to about 4000 slabs, from 118s. up to 120s. 10s., mostly to arrive from Holland; of the above, 2000 slabs are intended for Japan. In Holland during the early part of the month the market was very dull at 69 s. During the last ten days a large demand has sprung up, and the sales amount to 12,000 slabs, closing firm at about 70 s., but advises by telegraph report at 71 s.

**ENGLISH TIN.**—Early in the month, was very flat, and considerable sales made under official price; during the last week the makers were much firmer, and no sales took place under official prices, several declining to sell at all, except in very small quantities. An advance is expected.

The official returns from Holland are as follows:—

	1863.	1862.	1861.
Stock in Holland, Dec. 24 .....	Slabs 69,740 .....	Slabs 53,971 .....	Slabs 58,061
Delivered up to Jan. 31 .....	9,355 .....	6,105 .....	6,123
Stock on warrants, Feb. 1 .....	60,405 .....	48,866 .....	61,001
Arrived towards next sale .....	75,170 .....	81,620 .....	102,361

The arrivals of tin in London during January were as follows:—Straits, per Woodville, 1594 slabs; ditto, per Thone, 1067 = 2681 slabs; Banca in Holland, 850; total, 3511 slabs. Besides 500 slabs Banca to Bristol, and 279 slabs Straits to Liverpool.

We estimate the stock of tin in warehouse here at 2513 tons.

The shipment of tin from Singapore to Great Britain from Nov. 24 to Dec. 24 was nil; continental Europe and America also nil—price \$3 1/2—during the year 1862 it was 13,872 against 17,104 in 1861. From Penang, from Nov. 24 to Dec. 24 the export was to Great Britain, 3530 piculs; America and continental Europe, nil; price, \$255. The export to Great Britain during 1862 was 31,546 piculs; in 1861, 39,526 piculs.

**TIN-PLATES.**—The trade is decided flat. Some very large purchases of coke have been made at very low prices for forward delivery, and this tends to make coke generally very firm; but charcoal are depressed, and obtainable at prices quite incompatible with the cost of production. Cokes are quoted in Liverpool 21s. 6d. to 22s. 6d. in London, 6d. per box more.

#### DADELSSEN AND NORTH.

**PURIFICATION OF BLACK LEAD.**—Since the exhausting of the celebrated black lead deposit at Borrowdale, in Cumberland, some difficulty has been experienced in obtaining a really good article at anything like a moderate price, the purest specimens being now derived from Barreros, in Brazil, and containing very minute traces of iron. Artificial graphite may be formed by placing an excess of charcoal in contact with fused cast-iron; a portion of the charcoal dissolves on the iron, but separates on cooling, in the form of large and beautiful leaves. At the recent International Exhibition a process was described by Professor Brodie, which is entitled to attention. The crude graphite is first pulverised, then boiled in hydrochloric acid to remove the iron and manganese, after which the powder is washed in water, dried, and then mixed with heated dilute sulphuric acid and chlorate of potash. By this means the graphite is caused to absorb oxygen, and being submitted to a high heat, the mass may be crushed, and the pure plumbago obtained in the form of powder.

**THE LIVERPOOL TUBULAR LIFEBOAT "RESCUE."**—The national demonstration in Liverpool, on the 24th of last month, on the occasion of the launch of this boat (presented to that port by the Royal National Lifeboat Institution), in the presence of upwards of 50,000 spectators, may render a slight sketch of the tubular acceptable to our readers. The tubular lifeboat was invented in 1859, by the late Mr. Henry Richardson, of Aber Hirnant, Merioneth, and during that and the following year four boats of different sizes were built. The subject remained in abeyance for years, when the present Mr. H. T. Richardson, the son of the inventor, caused two small boats and a working model (the *Challenger*) to be constructed. She was 40 ft. in length, tubes 2 ft. 6 in. diameter, rowed 16 oars, and carried two lug sails and a jib. At this period a patent was secured; the boat was subjected to the severest trials that could be devised, and in all she was successful. He then challenged the lifeboats of England to competition, to ascertain which was the best, and at length the challenge was accepted by Mr. Beeching, with his prize boat. Consequently, in 1852, Mr. Richardson, his father, and crew, departed on the voyage, round the Land's End, from Liverpool to Ramsgate, but on reaching that port, it appeared that Mr. Beeching had sold his boat, and the trials were thus evaded. A model of the tubular boat was one of those sent in to compete for the Duke of Northumberland's prize, and was afterwards exhibited at the Exhibition of 1851. The advantages of these boats are, that they can neither upset, sink, swamp, or be water-lagged. We may add that, in 1856, the Royal National Lifeboat Institution, in compliance with the request of the late Colonel Morgan and the Lifeboat Committee at Rhyl, North Wales, placed a tubular boat on that station; the services rendered by this little boat (the *Noddy*) in saving life and assisting vessels into port, have greatly contributed to the desire of having the *Rescue* constructed for Liverpool.

**PAPER FROM REFUSE VEGETABLE SUBSTANCES.**—We have on several previous occasions referred to the improvements in the treatment of raw vegetable substances for the manufacture of "half stuff," introduced by Dr. R. H. Collyer, of Alpha-road, Regent's-road, and we are glad to learn that he is now preparing forthwith to carry out his process on a large scale at Gloucester.

The practical value of Dr. Collyer's invention may be judged of from the circumstance that he is the only inventor who was honoured with any marked recognition for the production of paper material, although he had more than 30 competitors from various nations.

In their official report the jury remarked that "Dr. Collyer (United Kingdom 1855) shows straw and other materials in the various stages of preparation for making paper, produced by a process which he has patented; this in the opinion of the eminent experts consulted by the jury is well entitled to special notice, as a decided improvement on the ordinary methods in use." The expression, however, of such an opinion is easily accounted for when the comparative tables of cost for the production of 1 ton of "half stuff" by the ordinary and by Dr. Collyer's process is considered. According to the present methods there is required—raw material—say, esparto, straw, or flax waste, 2½ tons, worth 9s.; alkali, 9 to 10 cwt., 4s. 10s.; bleach, 10 cwt., 5s.; coal, 2½ to 3 tons, 2s.

(the Chairman of the committee), after whom it was proposed to name the engine, and it will be designated Crutwell's engine. The toast was responded to with loud and continued cheering, after the manner of Englishmen, and Mr. Crutwell returned thanks for the compliment which had been paid him, and heartily wished success to the adventurers. It is expected that the water will be forced in a few days, when the sinking of the engine-shaft below the 50 will be resumed, with every prospect of ultimate success.

## LONDON AND COUNTY BANK.

The annual general meeting of proprietors was held at the London Tavern, on Thursday.—Mr. W. Nicol, M.P., in the chair.

The notice convening the meeting having been read, the report of the directors was submitted, as follows:

The directors, in submitting to the proprietors the accounts of the bank for the half-year ending Dec. 31, last have to report that, after making ample provision for bad and doubtful debts, including some unusual charge which had fallen on the half-year, interest to customers, expenses of management, rebate and income tax, the net profit amounts to £45,547. 4s. 5d., which sum, added to £761. 16s. 7d. brought forward, results in a total of £45,817. 1s. From the above sum, the directors recommend that the usual dividend of 6 per cent. be declared, together with a bonus of 1½ per cent. making in all 12½ per cent. for the past year. This arrangement leaves £482. 2s. 3d. to be carried forward to profit and loss new account.

Frederick Harrison, Esq., lately one of the auditors, has been unanimously elected to a seat at the board. This creates a vacancy in the office of auditor, which it is competent to the meeting to fill up.

Directors retiring by rotation are—Wm. Nicol, Esq., M.P., James Laming, Esq., and Thomas Tyringham Bernard, Esq., all of whom are eligible for re-election, and other themselves accordingly.

The dividend will be payable at head office, or at any of the branches, on and after Monday, the 16th inst.

THE CHAIRMAN said it was his duty as briefly as possible to lay before the proprietors some details connected with the bank, and also to offer some explanation of the state of the different accounts. The first thing which would, perhaps, be foremost in their minds—is it had been in the minds of the directors for years past—was the decision lately given respecting the Chancery mortgage, which had been the plague-spot of this bank for years past, but was now finally settled, although, he was sorry to say, adversely to the bank. That, however, had been almost expected since the decision given in the Vice-Chancellor's Court; but their counsel was so strongly opposed to the judgment that they appealed against it, when the Lord Justices decided against the bank. Therefore, they should treat it as having been a diseased limb, pressing upon the health of the bank for years past, which was now removed. Some mystery existed in the public mind respecting this mortgage. The directors, upon previous occasions, had been unwilling to touch upon it, because law proceedings were pending; but now that the question was settled, he might make a few explanatory remarks with regard to it. It was supposed by some people that this sum had to be paid by the bank, whereas it was paid ten years ago. It did not unfavourably affect the profits, because the directors had thought it unadvisable to make any dividend arising out of that sum, although it had been regarded as an asset. The fact was there was sent to the Duke of Buckingham, ten years ago, upon a mortgage the sum of £100,000., the Bank advancing £90,000. of that sum. The mortgages were amply sufficient, as had been proved—he meant the estates—for they had realised something like £90,000. After Mr. Sadler's death, however, a new claimant sprung up in the person of Mr. Hyatt, whose name was not heard in the matter before, when it was, of course, considered a matter to be litigated. The bank were advised that this new claimant stood no chance, and that the mortgage was as sound and good as a bank note. Although it had always been rendered as an asset, it had been as a dead asset, for they had not taken it into calculation in dividends. The capital this time last year stood at £50,000., when a resolution was passed to increase it by £100,000., and £50,000. to the reserve fund. The shares were all taken up at the time, and had been very punctually paid upon; and the amount now stood at £58,575.; the amount due by the bank for customers' balances, &c., was £7,151,186.—That was a very considerable increase upon the amount this time last year, when it stood at £482,000. That was a gratifying feature, because it showed the confidence that the public had with respect to this bank. The liabilities on acceptances and endorsements by the bank, circular notes, and letters of credit, amounted to £66,368., but that was altogether an arbitrary sum. The gross profit for the half-year, after making provision for bad and doubtful debts, and, as stated in the report, after some unusual charges had been written off, amounted to £44,512. The cause of this apparent diminution in the gross profits arose from the fact of the board having taken the opportunity of writing off all the sums that had been paid on account of the disastrous costs and charges of the suits connected with Mr. Sadler. He mentioned this that proprietors might know that so far from the profit for the half-year having been less, that it had increased in a satisfactory manner. The result of the past half-year's operations was the more gratifying, when it was recollected that during that period money had been very abundant, and the rate had been low; but, under all these adverse circumstances, the bank had earned a gross profit for the half-year larger than during any previous corresponding period. Upon the other side of the accounts, proprietors would see that the cash in hand—that is, the amount of money in the tills at their 120 branches—was £81,890., which was larger than usual; the cash placed at call and at notice amounted to £1,159,329.; the amount invested in Government and guaranteed stocks was £51,895.; and in other stocks and securities, £53,913.; discounted bills, notes, and temporary advances to customers, £583,758. That was larger than during the previous half-year, and it was gratifying to know that all those matters appeared to be in a thoroughly safe and sound condition. The advances to customers upon special securities amounted to £61,963. It was from this item that they had taken this Chancery mortgage, and it was proposed to deal with it by transferring from that £61,963. £90,000. was the original amount of that mortgage, but interest had been attached to it for two or three years, and which proprietors had the benefit of at the time. It was right, however, to replace that amount by charging the reserve fund £100,000.; so that the reserve fund would, when this amount was deducted, stand at £5,000. The freehold premises in Lombard-street and Nicholas-lane, and freehold and leasehold property at the branches, with fittings and fixtures, stood at the present time at £14,724.; interest paid to the customers, £2,636.; and salaries and other expenses at the head office and branches, including income tax on profit and salaries, £2,119.; but that was rather a larger amount than during the previous half-year. The bank had been increasing its branches and its business, and naturally the expenses had increased. He now came to the profit and loss account. The interest paid to customers had already been stated, as had also the expenses; the rebate on bills not due, carried to new account, £11,273.; dividend of 6 per cent. for the half-year, £5,078.; bonus of 1½ per cent., £8769.; leaving a balance to be carried forward for future dividend, £482. Since upon the other side of the account—Balance brought forward from last account, £761. and gross profits for the half-year, after making provision for bad and doubtful debts, £44,512. Since the last meeting a new branch had been opened at Lambeth, which was proceeding very satisfactorily. They had made the Kensington branch an independent one, because the branch had increased so considerably, and the manager at Knightsbridge had his hands quite full. The branch at Covent Garden was a very important branch. As regarded the Borough branch, the bank had secured the lease from the Corporation of London of the site of the old Town Hall, and the building, it was expected, would be finished in the course of the next year. They must all regret the death of Mr. Withers, the late manager of the Newport branch; he had been succeeded by Mr. Anderson, who was formerly at Tunbridge. Mr. Harrison, who had been for many years one of their valuable auditors, had been elected director since the last meeting, and he (the Chairman) was quite sure that Mr. Harrison's services hereafter would prove as efficient upon the board as they had already been proved as auditor. They had all seen that new banks were springing up in all directions. Some of the valuable officers of the London and County Bank had not escaped notice; but he believed at the present moment he might say that none of their leading officers had been tempted by offers of large salaries to join the new undertakings. He concluded by moving the adoption of the report and accounts.

Mr. W. CHAMPEON JONES had great pleasure in seconding the proposition, which was put and carried unanimously.

A dividend was then declared of 6 per cent. on the capital stock of the company for the half-year ending Dec. 31, and a bonus of 1½ per cent., clear of income tax, leaving the balance of 14½% to be carried forward to the profit and loss new account.

Upon the adoption of Mr. Norman, seconded by Mr. Powles, a unanimous vote of thanks was passed to the Chairman and directors for the able and efficient manner in which they had conducted the business of the bank, which was acknowledged by the Chairman in appropriate terms.

The remaining auditors (Messrs. H. Overton and J. Wright) were reappointed. Mr. R. H. Swan, a large shareholder, was appointed auditor, in the room of Mr. Harrison, who had been elected a director.—The retiring directors were re-elected.

A cordial vote of thanks was passed to Mr. McEwan (general manager) and the officers of the establishment, for the zeal and ability with which they have discharged their respective duties.

Mr. McEwan, in acknowledging the vote, said it was always a pleasing duty to have to return thanks to the large and influential body of shareholders under whom his brother officers and himself had the honour of serving; and he did so upon the present occasion with the greatest gratification, because he felt (as did the directors) that unless they possessed the confidence of the proprietors and of the public, as well as of the directors, who knew them more intimately—the progress and prosperity of the bank must suffer, because they were persons who were brought more immediately into contact with the public. He thanked the proprietors upon this occasion, after seven years of trying anxiety, because the London and County Bank had now commenced a new lease of prosperity, although he did not think they could complain of a want of prosperity. He believed they had now attained that position in the public estimation which they deserved, but from which they had been kept back in former years by circumstances to which he need not further allude. (Hear, hear.)

The proceedings then terminated.

*Contribution towards a History of Electro-Metallurgy, establishing its Origin. By HENRY DIRCKS, Civil Engineer. London: E. and F. N. Spon. 8vo, 1863, pp. 120.*

The modern art of electro-metallurgy was jointly pursued by Mr. C. J. Jordan in London, Mr. T. Spencer in Liverpool, and Prof. Jacobi in St. Petersburg, in 1839. But until the publication by Mr. Jordan of his process, in the *Mechanics Magazine*, on June 8, 1839, the art of either engraving or electrolyzing was unknown to the public. Mr. Jordan's letter was dated May 22. Meanwhile Prof. Jacobi seems to have made known in St. Petersburg some portion of his experiments. And still later, that is on Sept. 12, Mr. Spencer read a paper on the subject before the Liverpool Polytechnic Society, for which he received a prize of 10*l.* He had as early as May 9 stated in writing that he would describe a process he had, which he believed to be similar to that publicly stated to have been invented by Prof. Jacobi. It may seem strange how, under such circumstances, Mr. Spencer ever came to be considered as the true and first inventor; and still stranger must it appear that he should have enlisted the late editor of the *Mechanics Magazine* so much in his favour as entirely to overlook Mr. Jordan's prior claim. All these circumstances Mr. Dircks has been at considerable pains to explain, and has successfully dealt with the tangled yarn he undertook to unravel. The work is mainly a reprint of the original papers as they appeared in 1844, with some additional matter. It appears by an address read by Mr. Spencer in December, 1851, at Liverpool, that he not only then adhered to his claim, but dated his invention from May 9, 1839. He, however, abstained from giving any proof, but Mr. Dircks here publishes a copy of that assumed proof of priority. As already stated, it was a mere notice, with a promise to give his process at a future day, which promise he fulfilled four months afterwards. This succinct and clear historical narrative its author has dedicated to Dr. Faraday, in evident sincerity of purpose; indeed, it is clear in the face of it that Mr. Dircks could have no personal motive in the design of such a work, the truthfulness of which was warmly admitted by the late most respected editor, Mr. J. Clinton Robertson, Dr. Ur. Mr. Shaw, and indeed, all eminent authorities on the subject. In his introduction Mr. Dircks has clearly stated the claims of invention, and fairly discussed the only just grounds that can give claim to priority of invention: a subject which his long professional experience must have made him exceedingly familiar with.

## THE ANCIENT BRITISH TIN TRADE.

The tin trade being an important branch of our national industry at the present day, naturally causes much interest to attach to anything concerning its early history. It is, therefore, with much pleasure that we refer to the carefully-written little volume—the *Cassiterides*: an enquiry into the commercial operations of the Phoenicians in Western Europe, with particular reference to the British tin trade—just issued through Messrs. Longman and Co., by Dr. George Smith, of Treve, Camborne, although our views upon the subject are diametrically opposed to those of the author. Dr. Smith displays a vast amount of research, and although we incline to, and even go beyond, the opinions of Mr. Cooley and Sir G. C. Lewis, rather than to his, we would not attempt to deny that he has supplied, in the work before us at least, some "apology for those who like him, still entertained old-fashioned notions on the subject." Dr. Smith has placed himself admirably in his pleading that even his opponents are compelled to recognise his ability.

In stating the position which Dr. Smith defends, we afford our readers ample information from which to infer the authorities he quotes, and the nature of his quotations, and it becomes unnecessary for us to enumerate the various towns, the imports and exports of which, at the remote times under consideration, he so carefully gives us. Dr. Smith very truly observes that "quotations of this kind do not admit of very clear and ample proof," but we think he might also add that circumstantial evidence upon the point is not very difficult to collect. The first object is to prove by "The Peripus of the Erythraean Sea" of Arian the merchant that tin was carried from Egypt down the Red Sea, small quantities of that metal being imported at Adabites, close to the Straits of Bab-el-Mandeb; and that tin was an article of import, and not of export, both at Baruzana and Nekunda; but there is no proof in these facts that the tin sent from Egypt was supplied from Britain, nor even that Egypt was supplied with tin from the West at all. But perhaps Dr. Smith's most unhappy allusion is to the internal Phoenician tin trade, since, taken with other circumstances, it will be apparent that it proves that the Phoenicians could not have traded with Britain. Dr. Smith tells us that "the tin must have been largely imported into Phoenicia at least as early as n. c. 1500;" and to this conclusion all the accounts tend. If tin was used in articles of the most elaborate design and manufacture prior to the Trojan war, then, as there was no supply of this metal as far as we can learn, from the East, there must have been a known market from whence it was procured." Now, as we can no more suppose that the ancient Britons who inhabited our island 1500 years before the Christian era were capable of systematic mining on their own account than that the aborigines of New Zealand, Australia, or the Sandwich Islands would be enabled to do at the present day, therefore we must make another supposition—that the Phoenicians established regular colonies in Britain, in order that such Phoenician colonists might supply the home market with tin. But this supposition is untenable, for, as Dr. Smith tells us, "all our sources of information agree in placing the Phoenician tin market at Gades for several centuries before n. c. 1100, when it may be regarded as in great prosperity;" consequently Phoenician colonies sufficiently large to enable the tin miners alone to supply at least Egypt, Arabia, India, and the eastern coast of Africa, must have had a continued existence for four hundred years—a time exceeding the period since the Spaniards and Portuguese entered South America; and about double as long as the Anglo-Saxon race has been in North America; yet we are asked to believe that the Phoenicians left no trace of their manners or customs, but permitted the ancient British aborigines to remain uncontaminated by contact with them, and to retain their Celtic language unmixed with anything Phoenician; though we doubt whether anyone would be bold enough to suppose that the aboriginal Australian will ever extinguish the tentonic dialect in Australia, or that the dialect spoken by the Incas will ever be revived in South America.

Upon these considerations alone, though there are many others equally conclusive, we may at once abandon the notion that the Phoenicians obtained their tin from Britain, and we opine that the earliest period at which that metal reached the Mediterranean from Britain was certainly after the Romans had visited the island: we believe that the Romans are as much entitled to the credit of having opened the British tin mines, or stream-works, as we are ourselves to that of developing the auriferous resources of Australia, or of making known the commercial value of titaniferous ironsand, the chrome iron, or the other mineral resources of New Zealand.

*The ANNUAL REVIEW OF MINING*, containing official returns for the year from about 200 mines, and a vast amount of interesting information, valuable to investors and speculators, is now ready, and can be had (price 1s.) of Messrs. Watson and Cuell, St. Michael's-alley, Cornhill; at the *Mining Journal* office, 26, Fleet-street, E.C.; or of any bookseller or newsman.

## Royal School of Mines, Jermyn Street.

**R**OYAL SCHOOL OF MINES, JERMYN STREET.—THE FOLLOWING COURSES OF LECTURES are about to BE COMMENCED:—THIRTY LECTURES ON PHYSICS, by Prof. TYNDALL, F.R.S., to be delivered on every week-day but Tuesday, at Ten A.M., commencing on the 16th February. Fee for the course, £3.

THIRTY-SIX LECTURES ON APPLIED MECHANICS, by Prof. WILLES, M.A., F.R.S., to be delivered on every week-day but Saturday, at Twelve, commencing on the 16th February. Fee for the course, £3.

THIRTY LECTURES ON GEOLOGY, by Prof. RAMSEY, F.R.S., to be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays, at Half-past One, commencing on the 16th February. Fee for the course, £3.

TRENTHAM REEKS, Registrar.

**WHEAL FORTESCUE MINE, ADJOINING THE DEVON GREAT CONSOLS.**—WANTED, FIVE HUNDRED OR ONE THOUSAND SHARES. Señor will please send number and lowest price to Mr. W. B. HARVEY, 11, St. Michael's-terrace, Plymouth. Capitalists, before investing in dividend or speculative mines, would do well to consult the above.

**GUNPOWDER WORKS—MANAGER WANTED.**—A GENTLEMAN of education and business habits, who either has a practical knowledge of the manufacture of gunpowder, or has a fair acquaintance with chemistry, is REQUIRED TO TAKE THE RESIDENT MANAGEMENT OF A GUNPOWDER WORK in the HIGHLANDS. As it is a post of great trust and responsibility, and as a good salary will be given (including an excellent house and garden), no one whose character will not bear the strictest enquiry need apply.—A married man will be preferred.—Applications, with references and testimonials, to be made to JAMES H. BUTLER, Esq., Gracechurch-street, London.

**ON SALE, ONE 100 horse power HIGH PRESSURE ENGINE**, nearly new; ONE 50 in. cylinder PUMPING ENGINE; TWO two-flued BOILERS, 32 ft. long, 8 ft. diameter; THREE ditto, 30 in. long, 7 ft. diameter; TWO one-flued BOILERS, 14 ft. long, 5 ft. diameter. Also, several egg-end BOILERS, and several HIGH PRESSURE and CONDENSING PUMPING and WINDING ENGINES of various sizes and descriptions, particulars and prices of which will be forwarded on application to Mr. Fox, 15, St. Ann's-square, Manchester.

**FOR SALE, BY PRIVATE CONTRACT, THE WHOLE OR A PORTION of a VALUABLE going COLLIERY in the SOUTH YORKSHIRE COAL FIELD, with rail and water communication.—Particulars may be known on application to Messrs. WOODHOUSE and JEFFCOCK, mining engineers, Derby; or to Messrs. NEWMAN and Sons, solicitors, Barnsley.—Barnsley, February 2, 1863.**

**NOTICE OF REMOVAL.**—In consequence of the house, No. 30, Strand, being suddenly required by the Charing-cross Railway Company, Mr. WHITTON ARUNDELL has REMOVED his office to No. 11, WATERLOO PLACE, PALL MALL.

**M. E. GOMPERS, MINING OFFICES,** 3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C. BUSINESS TRANSACTED in BRITISH and FOREIGN STOCKS and SHARES. Terms, 1½ per cent.—Bankers: London and Westminster Bank.

**M. R. THOS. THOMPSON, MINING OFFICES,** 12, OLD JEWRY CHAMBERS, LONDON, E.C.

Mr. Thompson has the means of obtaining the very first information, and is fully capable of giving the best advice, either for investment or speculation.

**INVESTMENT.—MR. THOMAS SPARGO, STOCK, SHARE, and MINING BROKER, Nos. 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., publishes, every Wednesday, a GUIDE TO BRITISH and FOREIGN MINING, and OTHER INVESTMENTS, which should be consulted by all capitalists. Post free on receipt of six stamps.**

**RICHARD CLIFT, MINE SHARE DEALER,** late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all letters are to be addressed.

**MR. H. WADDINGTON, MINING AND SHAREBROKER,** 74, OLD BROAD STREET, LONDON, E.C. MINING SHARES BOUGHT and SOLD at the usual commission. RAILWAY, BANK, and OTHER SHARES at Stock Exchange rates.

**MR. EDWARD BREWIS, STOCK, SHARE, and MINING BROKER, (ESTABLISHED 1857.)** OFFICES—49, GREY STREET, NEWCASTLE-ON-Tyne. BUYER of Nether Heath shares, and also Harwood; sellers will please state lowest price and number.

**JOHN GLEDHILL AND CO., MINE AGENTS AND SHAREBROKERS, MINING OFFICES, CORN EXCHANGE, LEEDS.**

**MESSRS. A. FRANCIS AND SON, DOLGELLY, AND GOGINAN.** MINES INSPECTED and FAITHFULLY REPORTED ON, with PLANS and DESCRIPTIONS of the WORKS.

**JAMES H. COCK, MINE SHAREBROKER AND DEALER,** REDRUTH, CORNWALL. J. H. Cock, having had 10 years' experience in the mining market, and being thoroughly acquainted with mines and their management, is in a position to advise or do business on the most advantageous terms. Cash or time bargains promptly attended to.

**M. R. T. H. ANDREW, MINE BROKER, LELANT, HAYLE, CORNWALL.** Business at all times in Providence, East Providence, Margaret, Kitty (Levant) Trecrom, St. Ives, Trelyon, Rosewarne Consols, Rosewall Hill, &c.

**CAPT. JOSEPH WEBB, REDRUTH, CORNWALL.** begs to inform his mining friends and the public generally that he now UNDER-TAKES THE INSPECTION of MINES. Capt. Webb's long experience in mining in all its departments is the best guarantee of his ability in such matters, and he trusts that, by carefully examining the mines he visits, he will be able to give them correct ideas of their position and prospects. In all cases of tin mine inspections, actual samples will be taken from all the most important points of operation, and carefully assayed.

**MINES IN AUSTRALIA.**—The ADVERTISER, who POSSESSES a very IMPORTANT MINERAL PROPERTY in SOUTH AUSTRALIA, is DESIROUS to HAVE IT INSPECTED and REPORTED ON by a PERSON THOROUGHLY QUALIFIED, by geological knowledge and practical mining experience, to perform that service. Communications from any such geologist and miner who is about to proceed to Australia, or from anyone who can recommend to the advertiser such a person already in the Australian colonies, will receive immediate attention.—Address, "C. A. H.", MINING JOURNAL office, 26, Fleet-street, London, E.C.

**MINE MANAGER.**—A superior MINE AGENT is REQUIRED as MANAGER of the PROSPER UNITED MINES. He must engage to devote the whole of his time and energies to the duties of his office at these mines. Salary, 14 guineas per month.—Applications, with testimonials, to be sent to Mr. C. W. Wacoona, the purser, 24, Southernhay, Exeter, on or before the 11th of February. Dated January 30, 1863.

FEB. 7, 1863.

## THE COTTON PLANTATION COMPANY OF NATAL

(LIMITED).

Incorporated with Limited Liability, under the Companies Act, 1862.

Capital £180,000, in 18,000 shares of £10 each, of which 6000 (including 3000 paid-up shares taken in part payment of lands) are already placed.

(With power to increase).

Deposit, 10s. per share on application; and 30s. per share on allotment.

Future calls will not exceed 20s. per share, at intervals of not less than three months.

DIRECTORS.

THOMAS BARNES, Esq., M.P., Farnworth, near Manchester, Lancashire, Member of the Council of the Cotton Supply Association, and Director of the Lancashire and Yorkshire Railway Company.

P. G. VANDER BYL, Esq., late of the firm of Messrs. Porter, Vander Byl, and Co., Cape Town.

EUGENE COLLINS, Esq., Merchant, 9, Gracechurch-street.

J. K. CROOKS, Esq., Cotton Spinner, Bolton, Lancashire.

HENRY DUNLOP, Esq., Chairman of the Chamber of Commerce, Glasgow, and Member of the Council of the Cotton Supply Association.

FREDERICK REED, Esq., M.R.I., 7, Cork-street, Burlington-gardens.

SAMUEL HENRY HINDE, Esq. (of the firm of Messrs. Hinde and Gladstone), 11, New Broad-street.

Capt. HORNBY, R.N., Knowsley, Lancashire.

ELIAS DE PASS, Esq., Merchant, 9, Fenchurch-street.

MARTIN SWINDLELLS, Esq. (of the firm of Messrs. Brooke and Swindells, Cotton Spinners), Hollington, near Macclesfield.

ROBERT TAYLOR, Esq. (late of the firm of Messrs. Roberts, Taylor, and Newton, of Manchester), Palace Club Chambers, King-street, St. James's.

(With power to add to their number).

BANKERS.

London ..... The Bank of London, Threadneedle-street.

Liverpool ..... The Bank of Liverpool.

Manchester ..... Messrs. Loyd, Entwistle, and Co.

SOLICITORS.

London ..... Messrs. Dawes and Sons, Angel-court, E.C.

BROKERS.

London ..... Lewis H. Haslewood, Esq., 7, Lothbury.

Liverpool ..... Messrs. Todd and Ashton.

Manchester ..... Henry Rawson, Esq.

Glasgow ..... Messrs. M'Elwan and Auld.

ACCOUNTANTS.

Messrs. Coleman, Turquand, Youngs, and Co., 16, Tokenhouse-yard, E.C.

SECRETARY—H. W. Wood, Esq.

MANAGER AT NATAL—Henry Milner, Esq.

OFFICES.—9, GRACECHURCH STREET, LONDON.

This company is formed for the purchase of land and the cultivation of cotton in the colony of Natal, which offers, in soil, climate, labour, and facilities for shipment, the most favourable conditions for abundant and profitable production, detailed particulars of which are given in the prospectus.

Copies of prospectuses, official reports, and other information may be obtained by Mr. H. W. Wood, the secretary, at the company's offices, 9, Gracechurch-street, E.C., to whom, or to the brokers of the company, applications for shares should be addressed.

LONDON AND COUNTY BANKING COMPANY.

Subscribed capital, £1,000,000, in 10,000 shares of £50 each.

Paid-up capital, £590,000. Reserve fund, £175,000.

DIRECTORS.

THOS. TYRNINGHAM BERNARD, Esq., M.P. FREDERICK HARRISON, Esq.

PHILIP PATTON BLYTH, Esq. EDWARD HUGGINS, Esq.

JOHN WILLIAM BURMESTER, Esq. WILLIAM CHAMPION JONES, Esq.

COLES CHILD, Esq. JAMES LAMING, Esq.

HUGH C. E. CHILDERS, Esq., M.P. WILLIAM LEE, Esq., M.P.

JOHN FLEMING, Esq. WILLIAM NICOL, Esq., M.P.

GENERAL MANAGER—William M'Kewan, Esq.

CHIEF INSPECTOR—W. J. Norfolk, Esq.

ASSISTANT GENERAL MANAGER—William Howard, Esq.

CHIEF ACCOUNTANT—James Gray, Esq.

INSPECTORS OF BRANCHES—J. Tulloch, Esq., and G. A. Addison, Esq.

HEAD OFFICE—21, LOMBARD STREET.

At the ANNUAL MEETING of the proprietors, held on Thursday, the 5th February, 1863, at the London Tavern, Bishopsgate-street, the following report, for the year ending 31st December, 1862, was read by the secretary.

WILLIAM NICOL, Esq., M.P., in the chair.

REPORT.

The directors, in submitting to the proprietors the accounts of the bank for the half-year ending 31st December last, have to report that, after making ample provision for bad and doubtful debts, including some unusual charge which had fallen on the half-year, interest to customers, expenses of management, rebate and income tax, the net profit amounts to £44,554 4s. 5d., which, added to £776 16s. 7d. brought forward, results in a total of £45,331 1s.

From the above sum the directors recommend that the usual dividend of 6 per cent. be declared, together with a bonus of 1½ per cent., making in all 13½ per cent. for the past year. This arrangement leaves £1488 2s. 3d. to be carried forward to profit and loss new account.

Frederick Harrison, Esq., lately one of the auditors, has been unanimously elected to a seat at the board. This creates a vacancy in the office of auditor, which it is competent on the meeting to fill up.

The directors retiring by rotation are—Wm. Nicol, Esq., M.P., James Laming, Esq., M.P., and Thomas Tyrningham Bernard, Esq., M.P., all of whom are eligible for re-election, and offer themselves accordingly.

The dividend will be payable at the head office, or at any of the branches, on and after Monday, the 16th inst.

BALANCE-SHEET OF THE LONDON AND COUNTY BANKING COMPANY, DEC. 31, 1862.

Dr.—Capital paid-up..... £ 598,375 0 0

Reserve fund ..... 175,000 0 0

Amount due by the bank for customers' balances, &amp;c. £7,151,136 6 6

Liabilities on acceptances and endorsements by the bank, circular notes, and letters of credit..... 366,368 3 5 = 7,517,504 9 11

Profit and loss balance brought from last account ..... 776 16 7

Gross profit for the half-year, after making provision for bad and doubtful debts ..... 144,312 8 9 = 145,089 5 4

Total ..... £8,435,968 15 3

Cr.—Cash on hand at head office and branches. £ 981,899 7 4

Cash placed at call and at notice ..... 1,169,329 14 4 = £2,141,229 1 8

Investments, &amp;c. ..... 651,805 5 5

Government and guaranteed stocks ..... 103,913 15 10 = 755,809 1 3

Discounted bills, notes, and temporary advances to customers in town and country ..... 5,083,758 16 8

Advances to customers on special securities ..... 261,963 7 4 = 5,345,722 4 3

Freehold premises in Lombard-street and Nicholas-lane, freehold and leasehold property at the branches, with fixtures and fittings ..... 104,724 3 2

Interest paid to customers ..... 26,564 10 8

Salaries and all other expenses at head office and branches, including income tax on profits and salaries ..... 62,119 14 3

Total ..... £8,435,968 15 3

PROFIT AND LOSS ACCOUNT.

Dr.—Interest paid to customers ..... £ 26,364 10 8

Expenses, as above ..... 62,119 14 3

Rebate on bills not due, carried to new account ..... 11,273 19 5

Dividend of 6 per cent. for the half-year ..... 35,078 7 0

Bonus of 1½ per cent. ..... 8,769 11 9

Balance carried forward ..... 1,483 2 3

Total ..... £ 145,089 5 4

Cr.—Balance brought forward from last account ..... £ 776 16 7

Gross profit for the half-year, after making provision for bad and doubtful debts ..... 144,312 8 9

Total ..... £ 145,089 5 4

We, the undersigned, have examined the foregoing balance-sheet, and have found the same to be correct.

Signed. HENRY OVERTON, JOHN WRIGHT, Auditors.

London and County Bank, January 29, 1863.

The foregoing report having been read by the secretary, the following resolutions were proposed and unanimously adopted:

1. That the report be received and adopted, and printed for the use of the shareholders.

2. That a dividend of 6 per cent. be declared upon the capital stock of the company for the half-year ending 31st December, 1862, together with a bonus of 1½ per cent., both clear of income tax, payable on and after Monday, the 16th February inst., and that the balance of £1488 2s. 3d. be carried forward to profit and loss new account.

3. That the thanks of this meeting be given to the board of directors for the able manner in which they have conducted the affairs of the company.

4. That the thanks of the meeting be presented to the auditors of the company for their services during the past year, and that Henry Overton and John Wright, Esqrs., be re-elected auditors for the current year.

5. That Richard Hinds Swaine, Esq., be elected an auditor of the London and County Banking Company for the current year.

6. That the thanks of this meeting be presented to William M'Kewan, Esq., the general manager, and also to the principal and other officers of the establishment, for the zeal and ability with which they have discharged their respective duties.

The election of three directors having been proceeded with, the following gentlemen were unanimously re-elected:—William Nicol, Esq., M.P., James Laming, Esq., and Thomas Tyrningham Bernard, Esq., M.P.

Signed. W. NICOL, Chairman.

Extracted from the Minutes.

Signed. F. CLAPPISON, Secy.

LONDON AND COUNTY BANKING COMPANY.

Notice is hereby given, that a DIVIDEND on the capital stock of the company of SIX PER CENT. for the half-year ending 31st December, 1862, with a BONUS of ONE AND A HALF PER CENT., will be PAID to the proprietors, either at the head office, 21, Lombard-street, or at any of the company's branch banks, on and after MONDAY, the 16th instant.

By order of the Board. W. M'KEWAN, General Manager.

No. 21, Lombard-street, Feb. 5, 1863.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Devon.

IN the MATTER of the COMPANIES ACT, 1862, and of the DUKE MINING COMPANY.—Notice is hereby given, that a PETITION FOR WINDING-UP the ABOVE-NAMED COMPANY by the Court was, on the 28th day of January last, presented to the Vice-Warden of the Stannaries by John Bayly, a creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the sittings of the Court, to be held at Truro, on Monday, at One o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or agent, of his intention to do so, such notice to be forthwith forwarded to the Secretary of the Vice-Warden, P. P. Smith, Esq., Truro, Cornwall. Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner or his solicitor, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's office, Truro, on or before Tuesday, the 10th day of February next, and notice thereof must at the same time be given to the petitioner, his solicitor, or agent.

SAMUEL CATER, Plymouth  
(Solicitor for the said petitioner).  
HENRY SEWELL STOKES, Truro  
(Agent of the said petitioner).

Dated January 30, 1863.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Devon.

IN the MATTER of the COMPANIES ACT, 1862, and of the DEVON GREAT ELIZABETH MINING COMPANY.—Notice is hereby given, that a PETITION FOR WINDING-UP the ABOVE-NAMED COMPANY by the Court was, on the 30th day of January last, presented to the Vice-Warden of the Stannaries by John Bayly, a creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the sittings of the Court, to be held at Truro, on Monday, the 16th day of February last, at Two o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or agent, of his intention to do so, such notice to be forthwith forwarded to the Secretary of the Vice-Warden, P. P. Smith, Esq., Truro. Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner or his solicitor, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before Saturday, the 14th day of February inst., and notice thereof must at the same time be given to the petitioner, his solicitor, or agent.

SAMUEL CATER, Plymouth  
(Solicitor for the petitioner).  
HENRY SEWELL STOKES, Truro  
(Agent of the said petitioner).

Dated February 3, 1863.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NEW WHEAT FRANCIS MINING COMPANY.—Notice is hereby given, that a PETITION FOR WINDING-UP the ABOVE-NAMED COMPANY by the Court was, on the 30th day of January last, presented to the Vice-Warden of the Stannaries by William Simmons, a contributory of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the sittings of the Court, to be held at Truro, Cornwall, on Monday, the 16th day of February last, at Two o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or agent, of his intention to do so, such notice to be forthwith forwarded to the Secretary of the Vice-Warden, P. P. Smith, Esq., Truro. Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner or his solicitor, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's office, Truro, on or before Saturday, the 14th day of February inst., and notice thereof must at the same time be given to the petitioner, his solicitors, or agent.

PAUL AND LINTON, Plymouth  
(Solicitors for the petitioner).  
HENRY SEWELL STOKES, Truro  
(Agent of the said petitioner).

Dated February 3, 1863.

## TO MINE CAPITALISTS—VALUABLE OPPORTUNITY.

MESSRS. OLVER AND SONS are favoured with instructions to SELL BY AUCTION, on Thursday, the 12th day of February next, at noon, at the counting-house, on the mine, the whole of that well-known and VALUABLE MINE, known as WHEAT LOVELL, situate in the parish of WENDRON, in the county of CORNWALL.

The mine will be offered in one lot, including the whole of the ENGINE, PLANT, MACHINERY, and MATERIALS, as the same are now at work, including—

A 5 in. cylinder PUMPING ENGINE, with the THREE BOILERS.

A 24 in. STAMPING ENGINE, for 24 heads.

## COLLIERIES, IRONWORKS, &amp;c.

**M. R. C. STUART BARKER, MINERAL AGENT,**  
12, BUCKINGHAM STREET, STRAND, LONDON, W.C., has UNUSUAL  
FACILITIES for DISPOSING of COLLIERIES, IRONWORKS, and MINERAL  
PROPERTIES of EVERY DESCRIPTION, having numerous applications from capi-  
talists constantly on hand. Proprietors disposed to sell or let, and parties desirous of  
purchasing or leasing, may generally accomplish their wishes by forwarding particulars  
of their requirements.

**FOREST OF DEAN.—VALUABLE COLLIERY TO BE**  
SOLD in this important and rising district. It comprises 150 acres of unworked  
coal of very superior quality, is fitted complete with plant and machinery, and is con-  
nected by a tramway with the railway system. As a safe investment, promising ample  
returns, this colliery has special recommendations.—For particulars, and to treat, apply  
to Mr. C. STUART BARKER, mineral agent, 12, Buckingham-street, Strand, London, W.C.

**SOUTH WALES.—SEVERAL DESIRABLE COLLIERIES TO BE**  
DISPOSED OF, within easy reach of the principal shipping ports.—Particulars on application to Mr. C. STUART BARKER, mineral agent, 12, Buckingham-street, Strand, London, W.C.

**FOREST OF DEAN.—A CAPITAL COLLIERY TO BE**  
SOLD, comprising nearly 50 acres, and embracing numerous and valuable beds of  
coal. Pits have been sunk, and with a small outlay a large quantity of coal might be  
raised.—For particulars, apply to Mr. C. STUART BARKER, mineral agent, 12, Buck-  
ingham-street, Strand, London, W.C.

**FOR SALE, GREAT ONSLOW CONSOLS MINE, with ALL**  
the PLANT and MACHINERY thereon. The mine is situated in the parish  
of ST. BREWARD, CORNWALL, on the western border of the Cheseawring granite  
formation, where the granite makes a junction with the killas. The seat embraces great  
scope, and has three known lodes traversing its length, besides two counter lodes inter-  
sected by the workings on the middle lode.

The north lode has not been explored, but has been cut in one place only by a shallow  
adit, where it is of great strength, and shows malleable copper on the back. The south  
lode has not been wrought on beyond being opened on a little on the back; this lode has  
its course into the hill going east, in what appears a channel of semi-decomposed granite.  
An adit might be brought home on its course, to have about 70 fms. back, in a short  
distance driving.

The middle lode, to which operations have been hitherto confined, has been wrought  
on to a depth of 122 fms. from surface. But as the engine-shaft was commenced on  
the top of the hill, the real depth of the mine, if the adit were brought home, would be about  
50 fms. below. The size of the lode, where laid open in the shallow levels, varies from  
6 to 18 feet wide, and is composed for the most part of masses of sulphur, mastic, quartz,  
large quantities of can (fluor-spar), peach, with copper ore scattered throughout. About  
10,000 tons of copper mastic and copper ore have been raised from the lode, and large  
quantities of mastic remain discovered throughout the mine. The greatest portion of  
the mastic raised has been made marketable and sold.

All the requisite machinery for the carrying out extensive operations have been erected  
at great cost, and are complete and in good working order, comprising powerful hydraulic  
pumping engine, thoroughly efficient and commandable, with powerful winding machine  
and crusher; the two latter are also worked by water-power. All machinery is driven  
by water-power, of which there is a reserve, after the present machinery is supplied,  
equivalent in force to three 50-hp. steam-engines.

The close proximity of the mine to the terminus of the Wadebridge Railway (about  
1½ miles) is of great advantage for the transit of all ores to the shipping wharf at Wade-  
bridge, the railway charge per ton being only 2s. 7d.

Relative to the prospects of the mine generally, it is considered the present workings  
are not deep enough to intersect the productive ground. The back of the lode shows  
such fine gossan as is seldom seen, under which are deposited large masses of coppery  
mastic, and below the mastic operations have not yet been carried. Moreover, lodes  
of such size and character, having large caps, may, and sometimes do, make shallow  
shoots of ore, but it is in depth the bulk of ore and permanent mine must be looked for.

The geological arrangement of all metallic veins or lodes to this, and, perhaps, every  
other country that have diagonal inclinations, has this law for making their respective  
mineral deposits, and the exceptions, if any, are very few indeed—viz., that wherever  
the lode makes its deposit of mineral there it takes a direction more towards the perpendicular  
line, the unproductive portions of the lode being where the underlie is greatest.

In other words, if the lode in its transit through the strata make the usual bends that  
all lodes (more or less), it will be found that the ore is deposited where the warp tends  
most towards the perpendicular line, and the most barren parts will be found where  
the lode has the flattest underlie. The above law has been fully borne out by facts in  
this mine.

The last three levels sunk have been on the course of the lode, which has taken a  
much flatter dip for several fathoms, both east and west of the engine-shaft, the underlie  
being much greater than the average underlie of the lode. The consequence was  
that the lode directly fell off in yield; but as this flatter underlie is greater than the average,  
nothing can be more reasonable than its again, in turn, curving back towards the per-  
pendicular, by taking a more vertical dip—in other words, assume its productive inci-  
nation. Then, under such large beds of coppery mastic, look out for courses of ore.  
The water flowing from the lode in the bottom of the mine contains such a large quantity  
of copper in solution as is probably unparalleled in any copper mine in the county.

It is considered, by highly respectable agents who have been engaged in mining in the  
Caradon district for many years, in some of the best mines, that Great Onslow contains  
the elements of a good copper mine, and that a share of the perseverance that has been  
required to make Phoenix what it was, and may again be, Marke Valley and East Ca-  
radon what they now are, would give it no ordinary chance of ranking with them.

It is uncertain whether one, two, or three levels more might have to be sunk before  
the lode would make the change alluded to above in its underlie, but it is something  
like a certainty that it is sure to do so in a reasonable distance, where the lode, according  
to the experience of practice, will likewise make its ore.

In the eastern end of the mine the lode has changed its dip, and become more vertical :  
the result is a very great improvement. The mine is in fork to the bottom, and can be  
inspected immediately.

A large amount of capital having been expended towards the development of the pro-  
perty, a good opportunity is presented to capitalists to speculate, as with the very super-  
ior advantages of being able to work the mine to the greatest depth that any mine has  
yet been sunk by means of water-power, a very moderate amount of capital in addition  
to the sum already expended would be sufficient to prove the mine a considerable depth  
below the present workings.

To inspect the mine and machinery, apply to Capt. GEORGE RICKARD, on the mine;  
and to treat for the purchase, apply to WILSON FORSTER, Esq., No. 23, Temple-street,  
Liverpool.

**FOR SALE, about FIFTEEN TONS of RAILWAY IRON,**  
weighing about 35 lbs. per yard. Also, 40 fms. of 8½ inch PUMPS. IRON  
DRAWING MACHINE for incline, with strong break. TWO IRON TRAM WAGONS  
will carry 2 tons each. The whole is of the best quality.—For price, &c., apply to Mr.  
CHARLES WEBBER, ironfounder, Newton Abbot, Devon.

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received, calls paid, and every class of Stock Exchange business effected.

There being a considerable amount of money locked up in shares not prominently be-  
fore the public, and consequently difficult of sale, MESSRS. T. FULLER AND CO. invite  
the holders of such stock to communicate with them, having channels for the disposal  
of every description of shares.

FOR SPECIAL SALE:—Shares in an established company (limited), the property  
freehold; and in several mines which pay regular dividends of 12½ to 20 per cent.

Messrs. FULLER and Co. having had upwards of 20 years' experience in the mining  
market, prompt them to point out shares in certain progressive mines as prizes for the  
year 1863.

Telegraphic messages promptly attended to.

Commission, 1½ per cent.

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Dividends paid, £273,049. Loss on mines disappeared, £515,452. New compa-  
ny advertised, 30; share capital, £389,772. Capitalists should read TREVOIR AND  
CO.'S "MINES AND MINING," and learn to estimate the rubbish so plentifully pro-  
vided for their ruin. Per post, 12 stamps.—21, Sun-street, London, E.C. Recommended  
by the "Cautious Man."

**M. R. GEORGE HENWOOD, MINING ENGINEER**  
LOCHHEAD HOUSE, LOCHWINNOCH, SCOTLAND, OFFERS his SER-  
VICES and ADVICE on mines situated in any part of England, Scotland, Wales, Ire-  
land, Isle of Man, &c. Mr. Henwood's extensive experience in his peculiar department  
of mining science is well known, and will be exerted to the utmost for the benefit of  
his clients.

**M. R. D. STICKLAND, M.E.,** having had upwards of 40 years'  
Mining experience in Cornwall, several years of which he has had the entire  
management of mines therein, enables him to GIVE ADVICE on MINES and their  
MANAGEMENT.

D. STICKLAND beg to OFFER HIS SERVICES in BUYING and SELLING SHARES  
on advantageous terms for capitalists, who will do well to consult him, either by letter  
or personally, previous to their investing in mines now at work, or in those schemes  
now being brought before the public. Good references given if required. Mines in-  
spected and faithfully reported on. Terms, from £2 2s. to £4 5s., agreeable to their  
magnitude. Travelling expenses beyond 10 miles not included.

His monthly "Circular" for February will contain the difference between Limited Li-  
ability and the Cost-book System in working mines, as well as a selected list of mines,  
and other matters useful for mining. Forwarded on receipt of six postage stamps.—  
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Sharedealing in this office is limited to special mines, and companies whose pretensions  
have been personally investigated, and to the dividend-paying mines ordinarily dealt  
with on the London market, and for the latter purpose arrangements have been made for  
the earliest information from the great mining districts. There can be little doubt that  
in dealing with well-established, dividend-paying mines, investors, without any greater  
risk than accrues from purchase of railway or house property, receive a much larger reg-  
ular profit than from any other species of investment, free from all trouble, and paid in  
the most convenient form for those who have limited incomes—viz., every two or three  
months; while those who enter into new undertakings, such as progressive mines, have  
the knowledge that nothing which is not bona fide, and has stood the test of thorough  
examination, is submitted to them. It cannot, of course, be expected that where the  
profits are so enormous that these later investments should be entirely free from risk.  
All that can be done is to ascertain the responsibility of the management, and the value  
of the prospects. This done, no speculations are likely to be so valuable as those in  
mining operations; it being an uncommon occurrence for shares to rise in value 200 and  
300 per cent. in a few months.

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ST. HELEN'S JUNCTION, LANCASHIRE.

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**NICHOLLS, WILLIAMS, AND CO.** have generally a GOOD  
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MANUFACTURE STEAM ENGINES of every description on the newest principle.  
Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts  
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PRIVATE CONTRACT or PUBLIC AUCTION, of EVERY DESCRIPTION of PRO-  
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WASHING MACHINE.—This is by far the MOST ECONOMICAL, as well  
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CHINES to the ADMIRALTY, MAKE a PORTABLE MACHINE for TESTING IRON up  
to 1½ in. in sectional area. It occupies but little space, and can be placed in an office.  
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offices, 7, Parliament-street, London, S.W.

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REFINED METALLIC NICKEL. | OXIDE OF COBALT. TWIRE, &c.  
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SELF-ACTING in FEEDING and SIFTING. THE MOST ECONOMICAL MACHINERY  
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ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for 12 years,  
with complete success, in MANUFACTURING their IMPROVED TURBINES, and  
can recommend them with confidence. This machine is applicable to all practicable  
heights of fall and quantities of water, giving a much higher percentage of power than  
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not being affected by floods or back-water; and it is particularly well adapted for any  
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## THE MINING SHARE LIST

## DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
100 Alderley Edge (Cheshire) [L.]	10 0 0 ..	..	7 18 0 ..	0 10 0 — May,	1862	
4000 Bedford United (copper), Tavistock	2 6 8 ..	..	13 0 0 ..	0 2 6 — Dec.	1862	
240 Boscombe (tin), St. Just	20 10 0 ..	..	36 10 0 ..	1 0 0 — Mar.	1862	
200 Botallack (tin, copper), St. Just	91 5 0 ..	..	275 300	455 15 0 ..	0 0 — Nov.	1862
5000 Bronfloyd (lead), Cardigan [L. £1]	2 7 6 ..	6	0 7 0 ..	0 3 0 — Jan.	1863	
916 Cargoll (silver-lead), Newlyn	15 8 7 ..	45	1 0 0 ..	1 0 0 — Nov.	1862	
1900 Carr Brae (copper, tin), Illogan	15 0 0 ..	..	273 19 0 ..	2 0 0 — Feb.	1862	
156 Copper Hill (copper) Redruth	48 0 0 ..	82 1/2 ..	80 85	9 0 0 ..	2 10 0 — Sept.	1862
12000 Copper Miners of England	28 0 0 ..	..	714 per cent.	— Half-yrly.		
35000 Dito ditto (stock)	100 0 0 ..	..	1 per cent.	— Half-yrly.		
1055 Cradock Moor (copper), St. Cleer*	8 0 0 ..	..	7 12 0 ..	0 4 0 — July.	1862	
512 Creegbrawse and Penkevil, St. Columb	—	..	0 10 0 ..	0 10 0 — Jan.	1862	
867 Cwm Eifin (lead) Cardiganshire [L.]	7 10 0 ..	..	7 18 0 ..	0 5 0 — Dec.	1862	
125 Cwmystwyth (lead), Cardiganshire*	32 0 0 ..	..	247 10 0 ..	4 0 0 — Sept.	1862	
280 Derwent Mines (sl.-lead), Durham	300 0 0 ..	..	147 0 0 ..	5 0 0 — June.	1862	
1024 Devon Gt. Com. (con.), Tavistock [S.E.]	—	..	515 525	838 0 0 ..	10 0 — Jan.	1862
358 Dolcoath (copper, tin), Camborne*	128 17 0 ..	..	693 10 0 ..	7 0 0 — Dec.	1862	
2000 Dolygwyn (lead), Wales	12 6 8 ..	10 1/2 ..	0 17 0 ..	2 6 0 — Feb.	1863	
512 East Bassett (cop.), Redruth [S.E.]	29 10 0 ..	53	106 0 0 ..	1 0 0 — Jan.	1863	
6144 East Cardon (copper), St. Cleer [S.E.]	2 14 6 ..	45 4/2 ..	5 17 0 ..	1 0 0 — Jan.	1863	
300 East Dartmoor (lead), Cardiganshire*	32 0 0 ..	..	84 10 0 ..	1 0 0 — Oct.	1862	
129 East Pool (tin, copper), Pool, Illogan	24 5 0 ..	..	320 0 0 ..	5 0 0 — Dec.	1862	
2800 Foxdale (lead) Isle of Man [L.]	25 0 0 ..	..	—	—	July.	1862
5000 Frank Mills (lead), Devon	3 18 6 ..	..	0 18 0 ..	0 2 0 — Mar.	1862	
1798 Great Wheal Fortune (tin), Breage	18 6 0 ..	83	31 32	3 15 0 ..	15 0 — Feb.	1863
5000 Great Wh. Vor'tin, (cp.), Helston [S.E.]	40 0 0 ..	6 1/2 ..	2 2 6 0 ..	0 5 0 — Sept.	1862	
10240 Gunnis Lake (Cillies Adit)	—	0 2 0 ..	0 3 0 ..	0 1 6 — Mar.	1862	
1024 Herodsfoot (ld.), near Liskeard [S.E.]	8 10 0 ..	52	49 51	21 10 0 ..	1 15 0 — Oct.	1862
1000 Hibernian Mine Company	92 6 2 ..	..	9 0 0 ..	5 0 0 — Sept.	1862	
400 Ibsorne (lead), Cardiganshire, Wales* [S.E.]	18 15 0 ..	..	359 10 0 ..	4 0 0 — Nov.	1862	
9000 Marks Valley (copper), Caradon	10 6 ..	9 1/2 ..	2 6 6 0 ..	0 2 6 — Jan.	1863	
1800 Minera Mining Co. [L.], (id.), Wrexham	25 0 0 ..	..	99 18 0 ..	7 0 0 — Nov.	1862	
640 Mount Pleasant (lead), Mold	4 0 0 ..	..	18 18 1 0 ..	7 6 — Aug.	1862	
528 North Treksyber (copper), St. Agnes	1 9 0 ..	4 3/4 ..	0 3 0 ..	0 1 6 — Dec.	1862	
5000 Orsedd (lead), Flintshire	0 0 8 ..	..	0 10 4 ..	0 8 — Mar.	1862	
640 Par Consols (cop.), St. Blazey [S.E.]	1 2 6 ..	..	36 16 6 ..	7 0 — Nov.	1862	
207 Parva Mina (copper), Anglesey [L.]	50 0 ..	..	47 10 0 ..	10 0 — Oct.	1862	
400 Phoenix (copper and tin)	—	..	—	—	July.	1862
1122 Providence (tin), Uny Lelant [S.E.]	10 6 7 ..	44	66 5 0 ..	1 5 0 — Nov.	1862	
6000 Rosehill Hill and Ransom United	2 18 0 ..	33 1/2 ..	0 8 6 ..	0 2 6 — Sept.	1862	
4026 Rosewarne Consols (copper)	3 7 0 ..	..	0 2 0 ..	0 2 0 — Oct.	1862	
16 Rhosneigr (lead)	50 0 ..	..	1250 0 0 ..	100 0 — Quarterly.		
512 South Cardon (cop.), St. Cleer* [S.E.]	1 5 0 ..	400	396 0 0 ..	5 0 — Jan.	1863	
512 South Tolgs (cop.), Redruth, Cornwall*	8 0 0 ..	53	73 10 0 ..	1 0 0 — May.	1862	
5000 South Exmouth (lead), Christow	—	0 0 ..	0 5 0 ..	0 5 0 — Dec.	1862	
496 S. Wh. Francis (cop.), Illogan* [S.E.]	18 9 0 ..	92	365 5 0 ..	1 0 — Jan.	1863	
500 South Woodley	—	..	0 6 0 ..	0 6 — June.	1862	
280 Spearno Moor (tin, copper), St. Just	31 17 9 ..	..	9 15 0 ..	1 0 — June.	1862	
910 St. Ives Consols (tin), St. Just	—	..	486 0 ..	0 5 0 — Nov.	1862	
6000 Tinicroft (cp., tin), Pool, Illogan [S.E.]	9 0 0 ..	16 1/2 ..	11 18 0 ..	0 5 0 — Dec.	1862	
1000 Trumpet Consol (tin), near Helston	11 16 0 ..	..	11 0 0 ..	2 0 — Mar.	1862	
4200 Vigra and Clogau (copper) [L. £5]	2 15 0 ..	30	27 29	4 12 0 ..	1 0 0 — Oct.	1862
6000 West Bassett (copper), Illogan [S.E.]	10 10 0 ..	13 1/2 ..	23 11 0 ..	5 0 — Jan.	1863	
1024 West Cardon (cop.), Liskeard [S.E.]	5 0 0 ..	36	101 1 0 ..	0 10 0 — Oct.	1862	
256 West Damself (copper), Gwennap	38 10 0 ..	..	46 0 ..	1 0 — Jan.	1863	
6100 West Fowey Consols (tin and copper)	7 10 0 ..	..	0 19 0 ..	0 3 — May.	1862	
1024 West Penitral	4 0 0 ..	..	2 19 6 ..	2 19 6 — May.	1862	
4000 W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0 ..	295	368 0 0 ..	5 0 — Dec.	1862	
512 Wheal Bassett (copper), Illogan* [S.E.]	5 2 6 ..	..	592 10 0 ..	1 0 — Feb.	1863	
1000 Wheal Bassett and Grylls (tin)	7 0 0 ..	..	1 0 0 ..	1 0 — Dec.	1862	
2900 Wh. Clifford (Amalgamated) (cp.), Gwen. 30 0 0 ..	22	..	21 23	41 9 2 0 ..	2 6 — June.	1860
1024 Wheal Grylls (tin), Perranporth	2 4 0 ..	..	3 2 0 ..	1 0 — Dec.	1862	
1024 Wheal Heartie (tin), St. Just	9 13 8 ..	..	0 5 0 ..	0 5 — May.	1862	
4000 Wh. Ludcock and Wrey (lead), St. Ives	2 10 8 ..	10	81 4 9	3 2 0 ..	1 0 — Jan.	1863
896 Wh. Margaret (tin), Uny Lel. [S.E.]	17 6 ..	..	33 40	75 5 0 ..	1 0 — Nov.	1862
100 Wheal Mary (tin), Lelant	36 2 6 ..	..	284 5 0 ..	4 0 — Mar.	1862	
1024 Wh. Mary Ann (ld.), Menheniot [S.E.]	8 0 0 ..	17	16 17	56 17 6 ..	10 0 — Dec.	1862
80 Wheal Owles (tin), St. Just, Cornwall	70 0 ..	..	310 18 0 ..	7 0 — Nov.	1862	
128 Wheal Prosper (tin), Lanivet	3 0 0 ..	..	—	4 0 — June.	1862	
396 Wheal Seton (tin, copper), Camborne	55 10 0 ..	245	145 15 0 ..	3 0 — Dec.	1862	
1040 Wh. Trelawny (sl.-ld.), Liskeard [S.E.]	5 17 0 ..	18 1/2 ..	46 2 6 ..	0 10 0 — Nov.	1862	

[\* Dividends paid every two months. † Dividends paid every three months.]

## MINES WITH DIVIDENDS IN ABEYANCE.

700 Aberdovey (silver-lead), Morlonth	—	10 0 ..	—	..	0 10 0 ..	0 10 0 — Mar.
2000 Cofn Cwm Brywyo (lead), Cardigansh.	33 0 0 ..	..	9 0 0 ..	0 4 0 — April.	1861	
254 Condufford (cp., tin), Camborne	—	0 0 0 ..	95	85 0 ..	0 2 0 — June.	1862
2450 Cook's Kitchen (copper), Illogan	17 0 0 ..	32 1/2 ..	33 34	1 7 0 ..	0 7 — May.	1862
476 Devon and Cornwall (copper)	—	5 6 3 ..	..	0 10 0 ..	2 6 — Feb.	1862
672 Ding Dong (tin), Guvna	40 13 6 ..	..	16 7 0 ..	1 10 0 — Mar.	1862	
12800 Drake Waits (tin, copper), Calstock	2 1 0 ..	21 2/4 ..	21 2/4 ..	0 15 0 ..	6 — June.	1862
4240 Power Consols (copper), Tywardreath	4 0 0 ..	..	41 9 2 0 ..	2 6 — June.	1860	
6000 Great South Tolgs (S.E.), Redruth*	0 14 6 ..	6 1/2 ..	17 18 0 ..	0 5 0 ..	5 — Dec.	1861
119 Great Work (tin), Germoe	—	..	221 10 0 ..	7 10 0 — Feb.	1857	
5000 Kelly Bray (lead, copper), Callington	4 15 6 ..	7% ..	6 0 0 ..	0 2 — Feb.	1862	
1024 Levant (copper, tin), St. Just	2 10 0 ..	..	1091 0 ..	0 5 0 — May.	1860	
20000 Mining Co. of Ireland (cop., lead, coal)	7 0 0 ..	19 1/2 ..	14 7 1 0 ..	7 0 — Dec.	1861	
6000 New Birth Cor. and Vitter Cons. (tin)	1 6 6 ..	..	0 3 6 ..	0 1 — Sept.	1861	
470 Newtowndown Mining Co., Co. Down	50 0 ..	..	86 0 0 ..	0 1 — Sept.	1858	
6000 North Downs (copper) Redruth	3 4 ..	3 1/2 ..	0 10 0 ..	2 6 — May.	1862	
1772 Polberro (tin), St. Agnes						